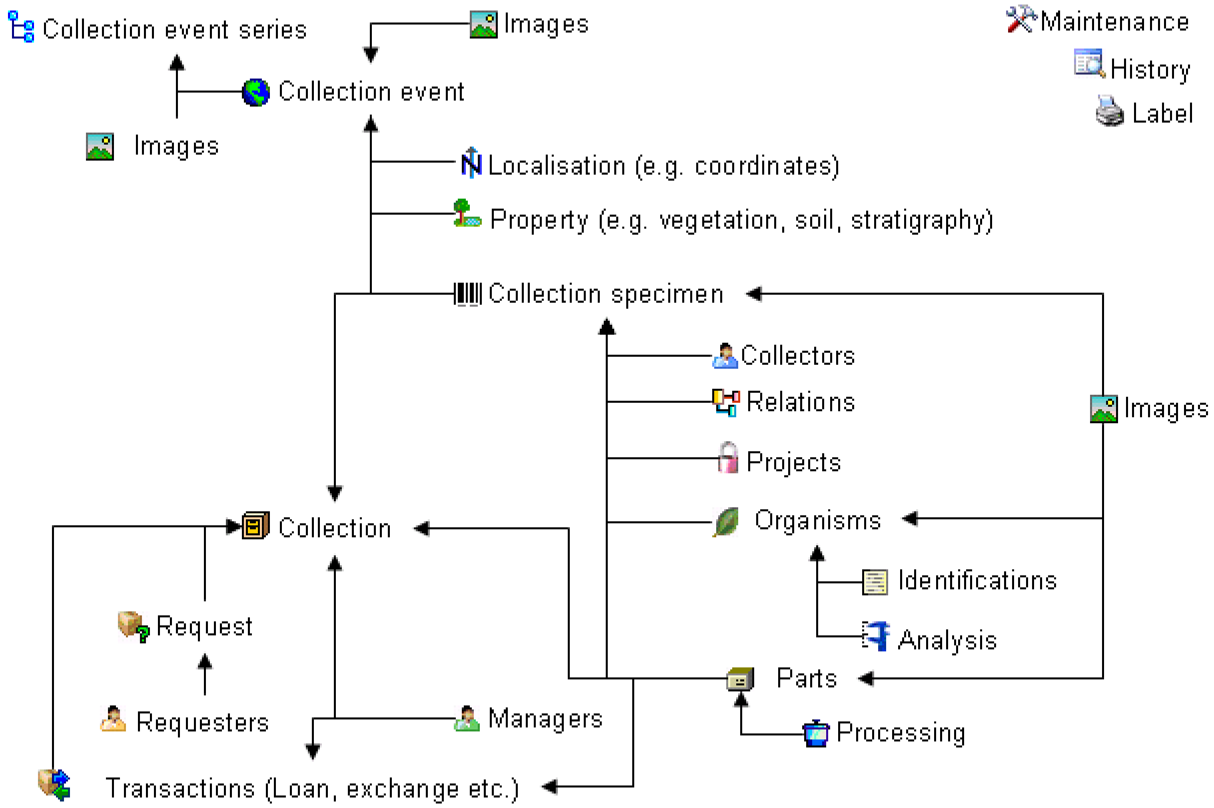
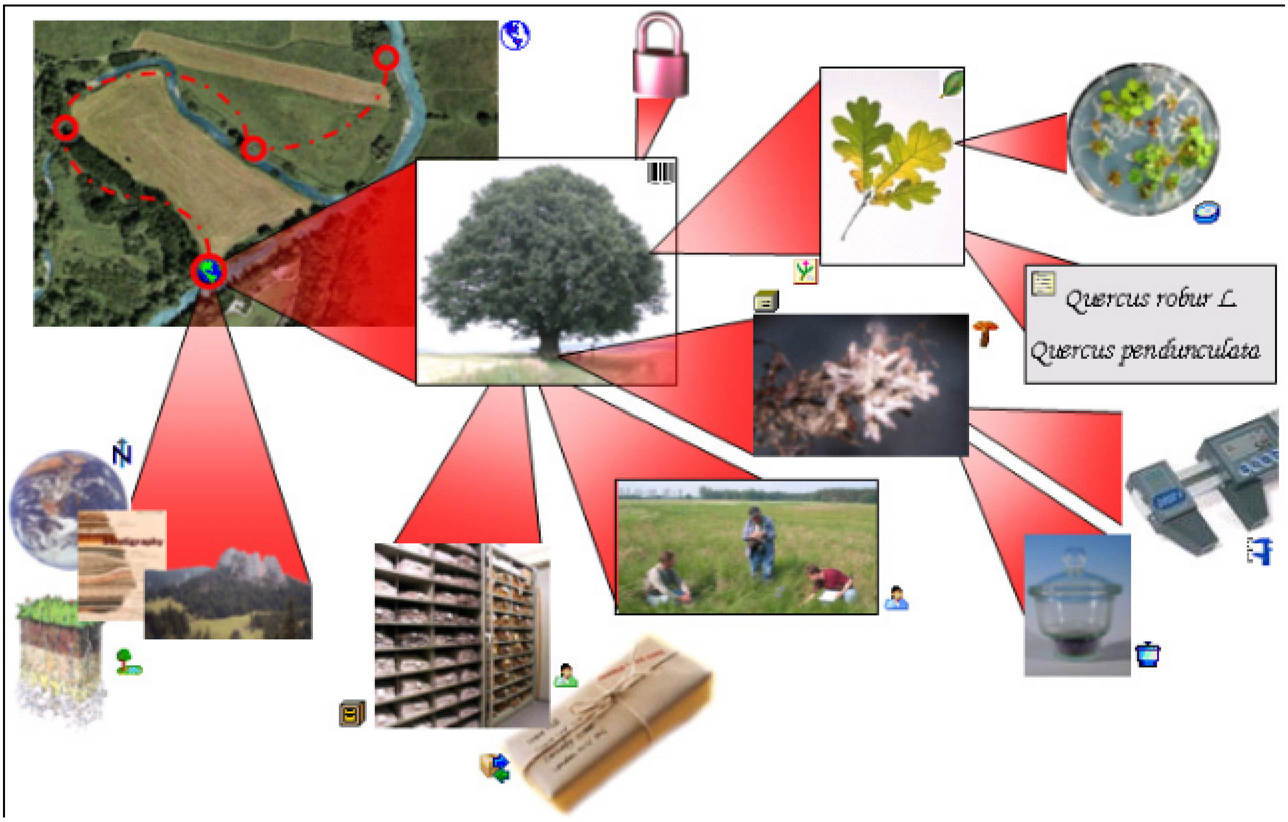
DiversityCollection

DiversityCollection (Version 2) is part of the database framework Diversity Workbench. Within this framework the application DiversityCollection is confined to the management of specimens in scientific collections. In this context it is designed to documente any action concerning the collection, storage, exchange and treatment of specimens in a collection and is also appropriate to store observation data. DiversityCollection is distinguished from other collection management systems by its focus on biological relations between organisms collected together as one or more specimens (e.g. host, parasite and hyperparasite, symbionts etc.). Any module within the Diversity Workbench is focused on a specific data domain. DiversityCollection keeps only data connected with the handling of collection specimens and observations. Data of other realms like e.g. taxonomy are handled in separate modules. For an overview of the available modules see Diversity Workbench. DiversityCollection might also be used as a stand-alone application.

The image below gives you an overview of the main parts, relations and functions of DiversityCollection



The image below gives an overview for some typical data depicted in DiversityCollection together with the symbols used throughout the program. A typical specimen may have been collected at a collection event during an expedition. The site of the collection event may be localized and characterized. The collectors collected twigs of the plant and fungi from the roots. They store the samples as herbarium sheets and specimens preserved by other methods in a collection. The manager sent some of the samples for which he had a request from a requester to another collection. The samples were collected as part of a project. Certain parts were cultivated, analysed and processed. The organisms on specimen were identified several times. Images were taken for the event series, the collection event, the collection specimen as well as organisms and part of this specimen.



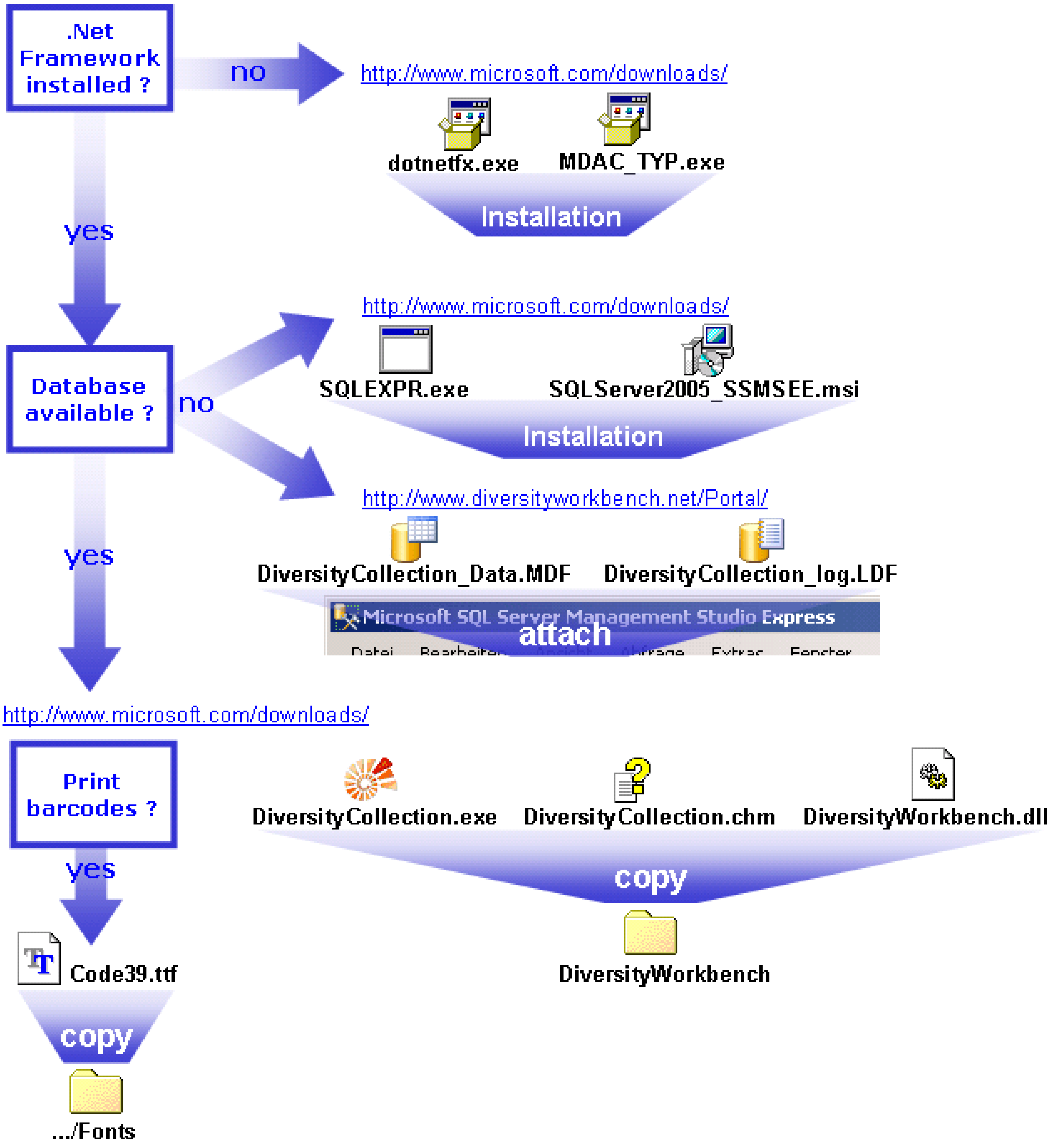
DiversityCollection 2 is based on [Microsoft]() SQL-Server 2005 and the .Net Framework, Version 2.0.

For licence and copyright see the [licence]() section.

Installation

To run DiversityCollection, you need the database and the client. All parts are free and can be downloaded from http://www.microsoft.com/downloads/ and http://www.diversityworkbench.net/Portal/.

The image below gives an overview of the installations and files needed.



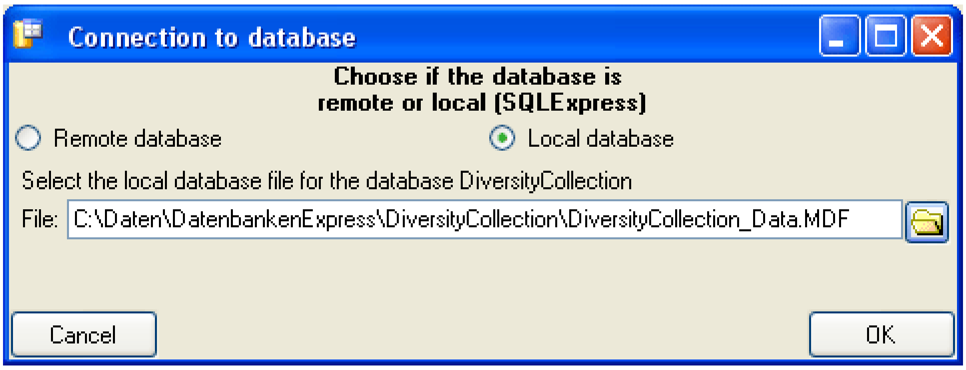
Database

DiversityCollection uses Microsoft SQL-Server 2005 as database engine. If you do not have a database server with DiversityCollection already available, you have to install the database engine first. Download the free version of Microsoft SQL Server Express

(SQLEXPR.exe resp. the version of you preferred language, e.g. SQLEXPR_DE.exe) and Microsoft SQL Server Managment Studio Express (SQLServer2005_SSMSEE.msi) from http://www.microsoft.com/downloads/. Start the program and follow the instructions for the installation.

Download the database files DiversityCollection_Data.MDF and DiversityCollection_log.LDF from http://www.diversityworkbench.net/Portal/ provided as a zip archive (DiversitCollection.zip) and copy them into your database directory.

If you plan to use the database on your local computer (SQL Server Express), start the program DiversityCollection.exe and in the main window click on the button or choose **Connection -> Database ...** from the menu. A window as shown below will open. Here choose the option **Local database** and select the database file in your directory.



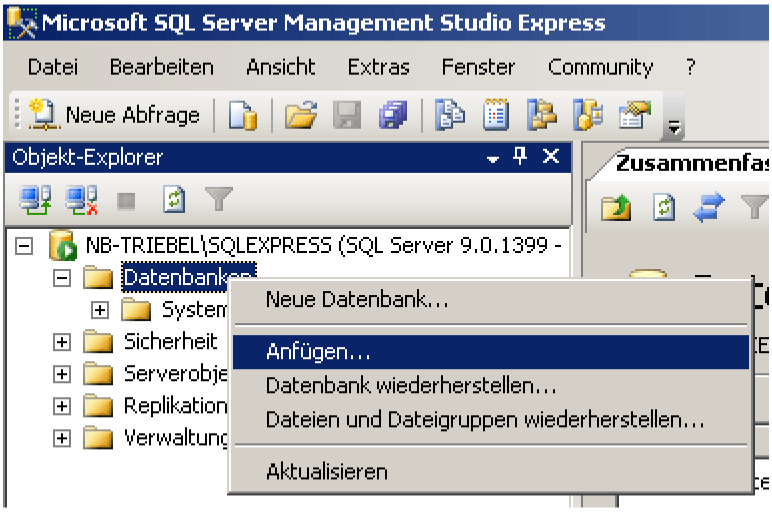
Choose if the database is remote or local (SQLExpress)

○ Remote database ● Local database

Select the local database file for the database DiversityCollection

File: C:\Daten\DatenbankenExpress\DiversityCollection\DiversityCollection_Data.MDF

If you want to use the database on a central server you have to attach the database to the database engine using the Microsoft SQL Server Managment Studio Express. In the **Object-Explorer** select databases and choose attach from the context menu as shown below.



A window will open where you can choose the file DiversityCollection_Data.MDF and attach it to the database engine.

Client

The client is based on the .Net framework from Microsoft. If not already present, you have to install the following components first:

Microsoft .NET Framework Version 2.0. Download (dotnetfx.exe), start the program and follow the installation instructions.

Microsoft Data Access Components (MDAC) 2.8. Download (MDAC_TYP.exe), start the program and follow the installation instructions.

(see http://www.microsoft.com/downloads/ for the latest versions)

Download the files for DiversityCollection from http://www.diversityworkbench.net/Portal/ provided as a zip archive. Copy all files (DiversityCollection.exe , DiversityCollection.chm img alt="" src="img/Chm.gif">, DiversityWorkbench.dll) into your DiversityWorkbench directory. To print barcodes of the font Code 39 the file Code39.ttf must be copied to the folder C:\WINNT\Fonts.

After the installation make shure to get the latest updates from http://v4.windowsupdate.microsoft.com/.

Menu

Overview of the menu in DiversityCollection

Connection

Database ...	Choose one of the databases available on the server. Only those databases will be listed to which the user has access permission
Module connections ...	Edit the connections to the other modules within the Diversity Workbench.
Transfer previous settings	Transfer the settings of a previous version
Quit	Quit the application and stop all processes started by the application

Query

Show query	Show or hide the query list
Predefined queries	Under this menu entry all predefined queries will be listed
Scan mode	Change to the scan mode to open the dataset of a specimen by scanning the barcode

Data

Import	
Specimen scans ...	Import scans of specimen labels
Import list ...	Import tab-separated lists
Export	
Export list ...	Export a tabulator separated file with the data of the specimen
XML ...	Export data as a XML-file according to ABCD

Administration

Analysis ...	Administration of the analysis methods used for the specimens
Collections ...	Administration used for the collections
Customize display ...	Customizing the display of the window, e.g. the material categories and taxoniomc groups that should be visible when creating a new entries
Maintenance ...	Maintenance of database entries especially if connected to other modules
Processing ...	Administration of the processing procedures applied in the collection
Queries ...	Creating and editing predefined queries
Transaction management	Management transactions, managers, loans etc.
Transactions ...	Administration of the transactions, e.g. loans, exchange etc.
Expired loans ...	Administration of expired loans. This menu entry will appear when there are expired loans in collections where the current user is a curator
Loan requests ...	Administration of loan requests for the collections a user is an collection manager. This menu entry will appear when there are loan requests for the managed collections of the current
My requests ...	Administration of the loan requests of a user. This menu entry will appear when a user placed requests for specimen
Requesters ...	User having the right to place requests for specimen of a collection
Managers ...	Administration of the users that manage collections and are e.g.

	responsible for the administration of the transactions
User ...	Administration of the users and their permissions in the database
Help	
Manual	Opens the online manual
Feedback ...	Opens a window for sending feedback
Info	Show the version of the program and corresponding information

Manual

The online manual DiversityCollection.chm must be placed in your application folder, together with the application DiversityCollection.exe and the library DiversityWorkbench.dll. To get information to any topic in the application DiversityCollection and open this manual, just click on the field you need information about and press F1. To open the manual from the menu, choose **Help -> Manual**.

Version

For information about the version of the client application choose **Help**, **Info...**

Management system for collections and observations

Version: 2.5.3.6

Institution: Staatliche Naturwissenschaftliche Sammlungen Bayerns, IT Centre
http://www.snsb.info/

Authors: Markus Weiss

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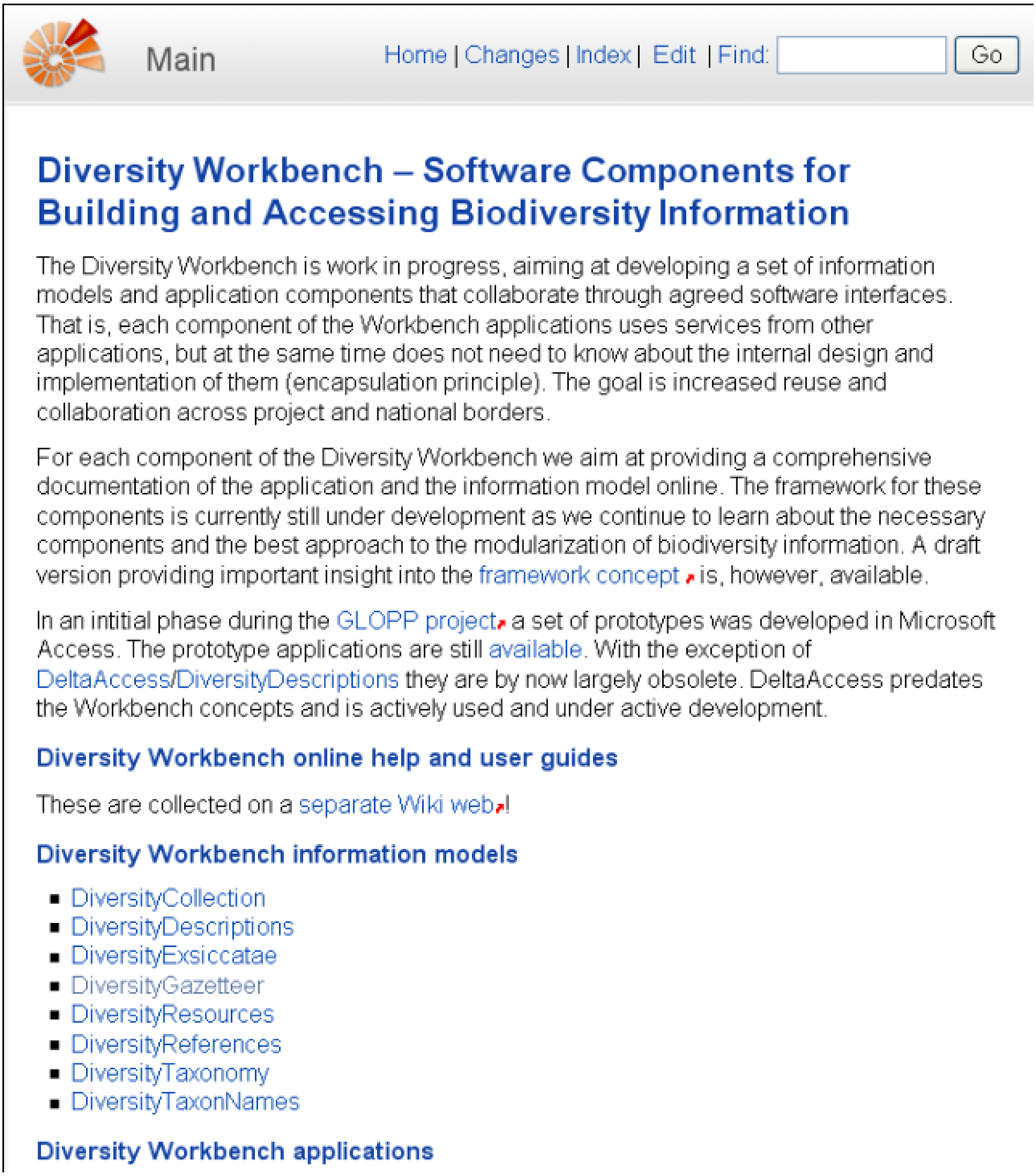
The current version in the example above is 2.5.3.6

Update of database and client

DiversityCollection is still in development. Therefore regular updates for the database and the client will be provided. When you start the program and connect to a database, the program will check if it is compatible with the database or if the database needs an update. In any of these cases an **update** entry in the menu will appear. If a new version of the client is available this menu will contain an **update client ...** entry. Click on it to open the webpage where you can download the cient as shown below.



Diversity Workbench – Software Components for Building and Accessing Biodiversity Information

The Diversity Workbench is work in progress, aiming at developing a set of information models and application components that collaborate through agreed software interfaces. That is, each component of the Workbench applications uses services from other applications, but at the same time does not need to know about the internal design and implementation of them (encapsulation principle). The goal is increased reuse and collaboration across project and national borders.

For each component of the Diversity Workbench we aim at providing a comprehensive documentation of the application and the information model online. The framework for these components is currently still under development as we continue to learn about the necessary components and the best approach to the modularization of biodiversity information. A draft version providing important insight into the framework concept is, however, available.

In an intitial phase during the GLOPP project a set of prototypes was developed in Microsoft Access. The prototype applications are still available. With the exception of DeltaAccess/DiversityDescriptions they are by now largely obsolete. DeltaAccess predates the Workbench concepts and is actively used and under active development.

Diversity Workbench online help and user guides

These are collected on a separate Wiki web!

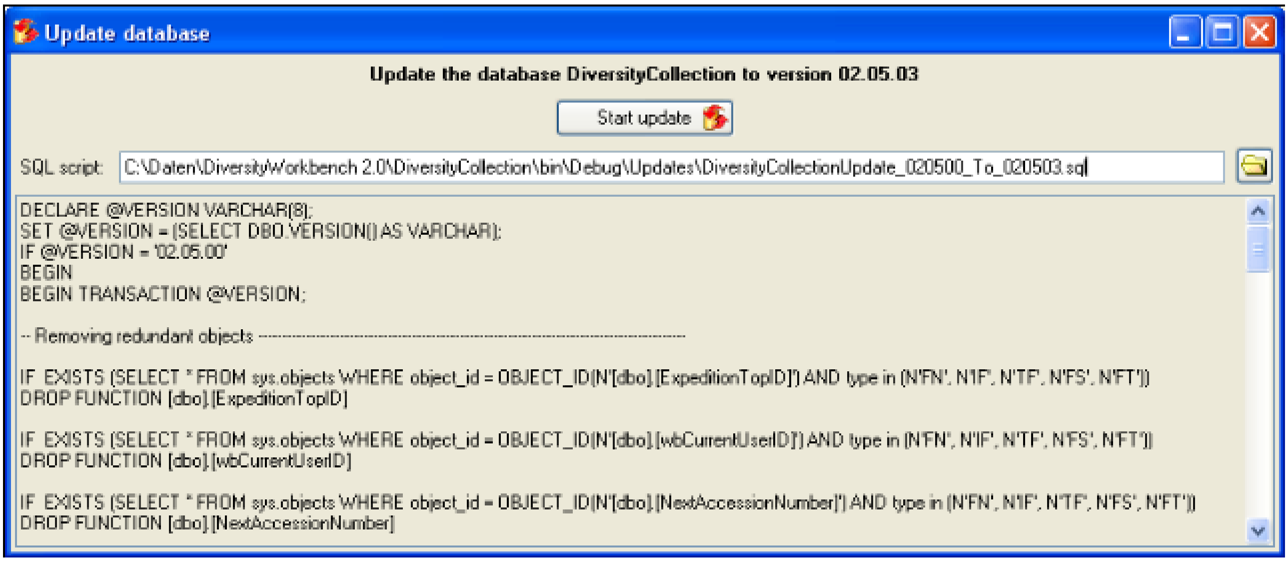
Diversity Workbench information models

- DiversityCollection
- DiversityDescriptions
- DiversityExsiccatae
- DiversityGazetteer
- DiversityResources
- DiversityReferences
- DiversityTaxonomy
- DiversityTaxonNames

Diversity Workbench applications

If you are the owner of the database (Database role = dbo) and the database needs to be updated, the menu will contain a **update database ...** entry. Select this entry to open a window as shown below to run the provided update scripts, delivered with the client software.

These scripts needs to run consecutively, so e.g. to update from version 2.5.1 to 2.5.4 you either have to run the script DiversityCollectionUpdate_020501_To_020504 or the scripts DiversityCollectionUpdate_020501_To_020502, DiversityCollectionUpdate_020502_To_020503 and DiversityCollectionUpdate_020503_To_020504. The program will guide you through these steps and check for the scripts. All you have to do is click the **Start update** button.



Update the database DiversityCollection to version 02.05.03

SQL script: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\Updates\DiversityCollectionUpdate_020500_To_020503.sql

```
DECLARE @VERSION VARCHAR(8);
SET @VERSION = (SELECT DBO.VERSION() AS VARCHAR);
IF @VERSION = '02.05.00'
BEGIN
BEGIN TRANSACTION @VERSION;

-- Removing redundant objects ------------------------------------------------------------------------

IF  EXISTS (SELECT * FROM sys.objects WHERE object_id = OBJECT_ID(N'[dbo].[ExpeditionTopID]') AND type in (N'FN', N'IF', N'TF', N'FS', N'FT'))
DROP FUNCTION [dbo].[ExpeditionTopID]

IF  EXISTS (SELECT * FROM sys.objects WHERE object_id = OBJECT_ID(N'[dbo].[wbCurrentUserID]') AND type in (N'FN', N'IF', N'TF', N'FS', N'FT'))
DROP FUNCTION [dbo].[wbCurrentUserID]

IF  EXISTS (SELECT * FROM sys.objects WHERE object_id = OBJECT_ID(N'[dbo].[NextAccessionNumber]') AND type in (N'FN', N'IF', N'TF', N'FS', N'FT'))
DROP FUNCTION [dbo].[NextAccessionNumber]
```

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For information about the license of the client software choose **Help**, **Info...**

DiversityCollection

Management system for collections and observations

Version: 2.5.3.6

Institution: Staatliche Naturwissenschaftliche Sammlungen Bayerns, IT Centre http://www.snsb.info/

Authors: Markus Weiss

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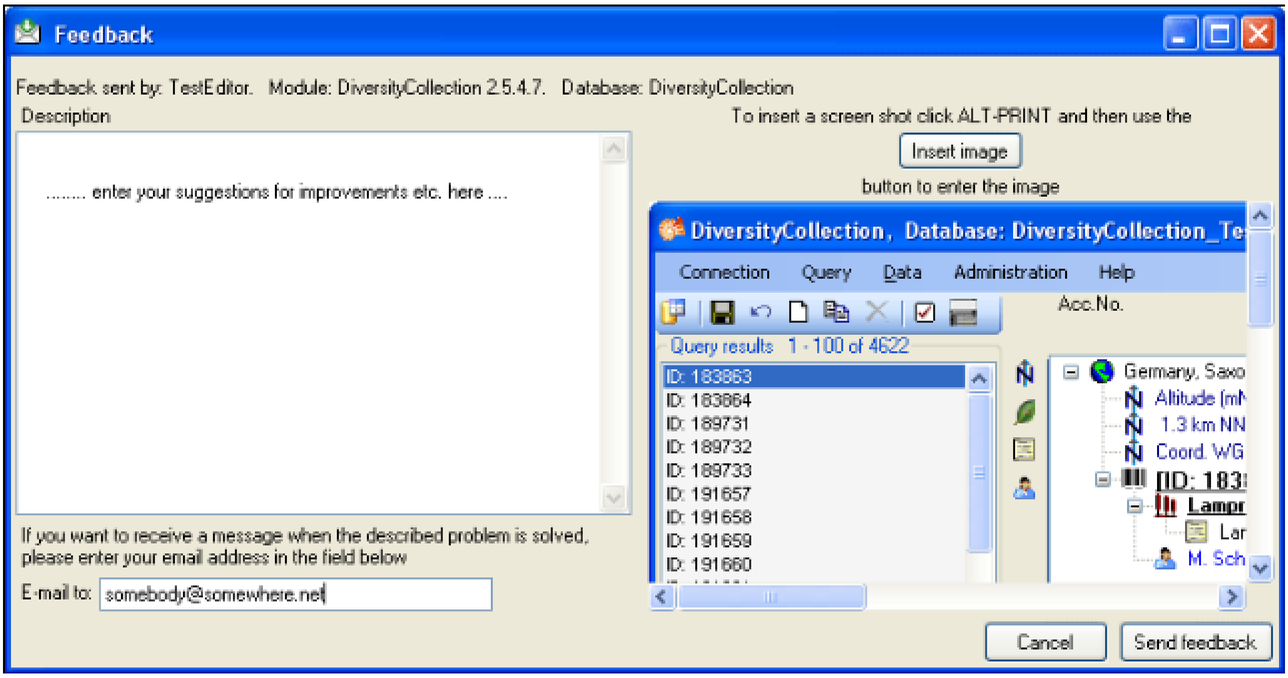
Feedback

If you have suggestions for improvement, need any changes in the program or encounter an error you can give a feedback to the administrator. Click on the [**ALT**] and [**PRINT**] buttons to get a screen shot of your current form. After creating the screen shot choose **Help - Feedback** from the menu to open the feedback window as shown below.



Feedback sent by: TestEditor. Module: DiversityCollection 2.5.4.7. Database: DiversityCollection

Description

.... enter your suggestions for improvements etc. here ....

To insert a screen shot click ALT-PRINT and then use the Insert image button to enter the image

DiversityCollection, Database: DiversityCollection_Te

Query results 1 - 100 of 4622

ID: 183863
ID: 183864
ID: 189731
ID: 189732
ID: 189733
ID: 191657
ID: 191658
ID: 191659
ID: 191660

Germany, Saxo
Altitude (m
1.3 km NN
Coord. WG
[ID: 183
Lampr
Lar
M. Sch

If you want to receive a message when the described problem is solved, please enter your email address in the field below

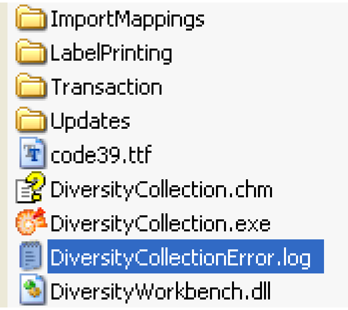
E-mail to: somebody@somewhere.net

Click on the Insert image button to insert the screen shot and give a comment about your problem. Then click on the Send feedback button to send your feedback to the administrator. If you want to receive a message, when the problem you described is solved, please enter you e-mail address in the field under the descrption.

In case you do not have access to the central database for the feedbacks, the program will open your mail client to send an e-mail. In case of bugs in the program it would help if you attach the file **DiversityCollectionError.log** located in your application directory (see image below).

Error logging

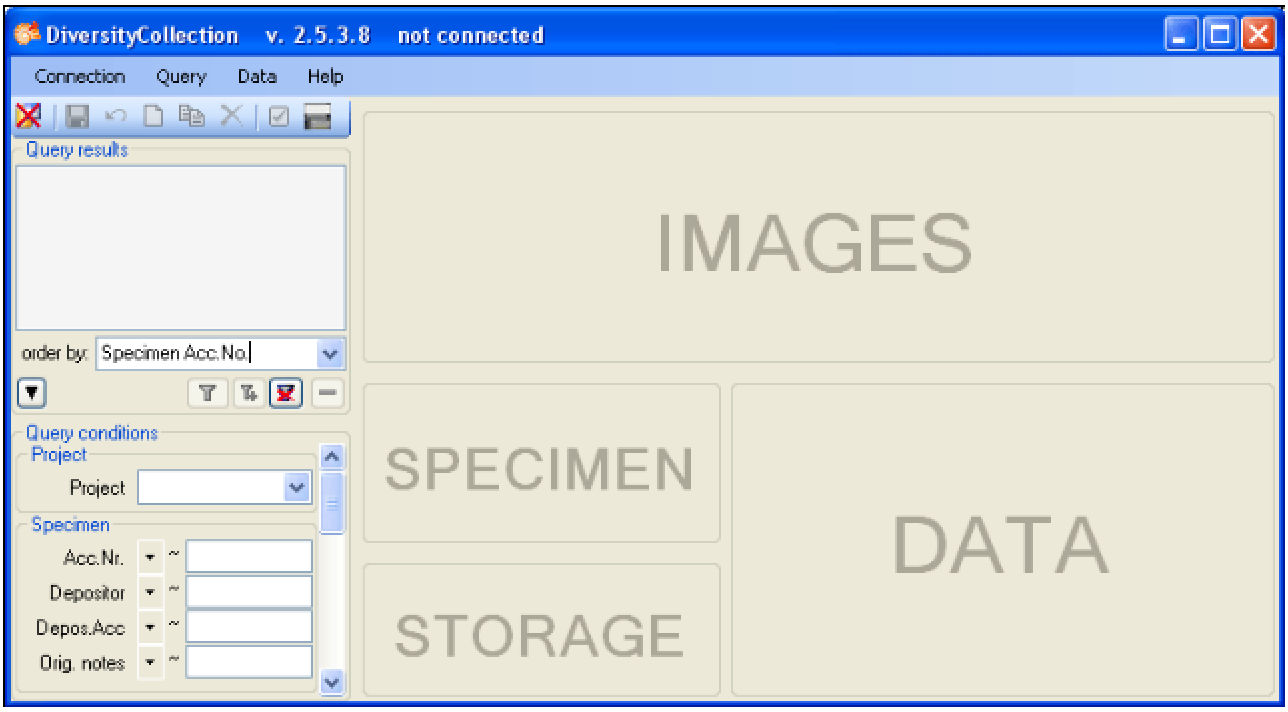
If any error messages show up through working with the application you can find further details concerning the part of the application where the error occured and the parameters involved in the file **DiversityCollectionError.log** located in your application directory.



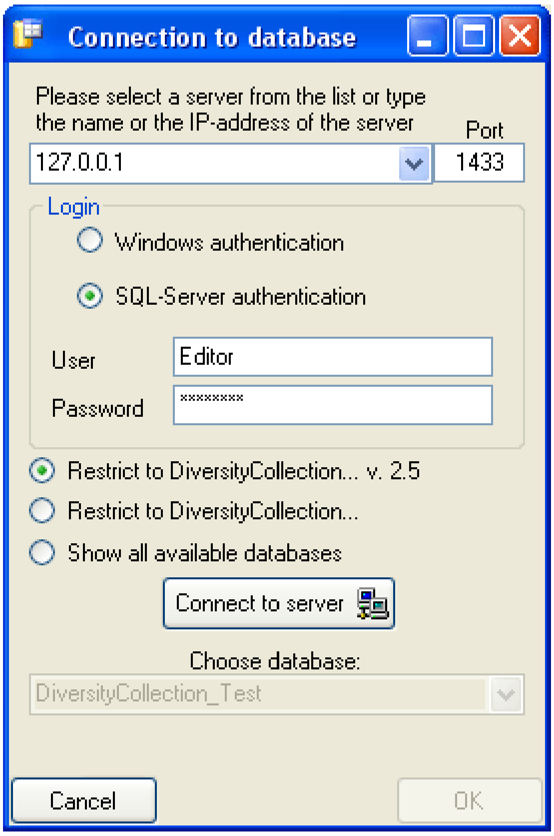
ImportMappings
LabelPrinting
Transaction
Updates
code39.ttf
DiversityCollection.chm
DiversityCollection.exe
DiversityCollectionError.log
DiversityWorkbench.dll

Tutorial - first steps

This tutorial will guide you through the first basic steps to enter a single dataset in DiversityCollection. After the installation, make sure, you have access to the database. To start the programm, double click on the DiversityCollection.exe in the directory where you copied the files of DiversityCollection. The main window will open.



If you open this window for the first time, you have to connect to the database. Click on the ☒ button or choose **Connection -> Database...** from the menu. A window will open where you can enter your account information and choose the database (see image below, for further informations see database access).



Please select a server from the list or type the name or the IP-address of the server

Port

127.0.0.1

1433

Login

○ Windows authentication

● SQL-Server authentication

User Editor

Password ********

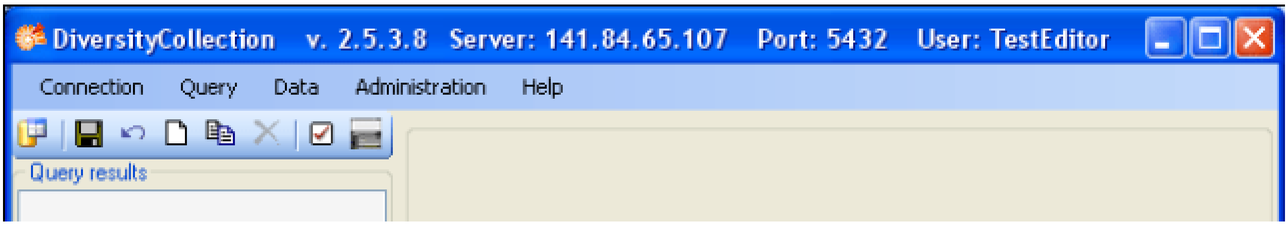
● Restrict to DiversityCollection... v. 2.5

○ Restrict to DiversityCollection...

○ Show all available databases

Choose database: DiversityCollection_Test

After connecting to the server and choosing a database click on the **OK** button to return to the main form. As indicated by the symbol in the right upper corner, you are now connected to the database. In addition the header of the window shows your current login informations (see below).



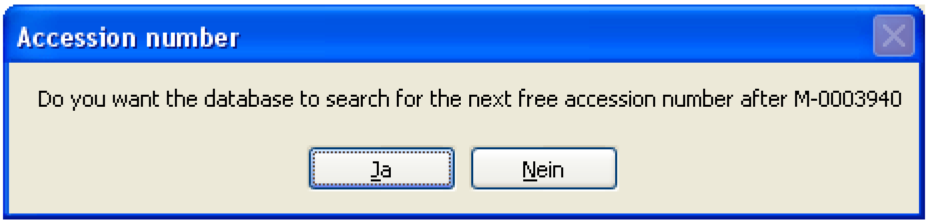
DiversityCollection v. 2.5.3.8 Server: 141.84.65.107 Port: 5432 User: TestEditor

This tutorial is continued in the sections listed below.

- section Collection event
- section Collection specimen
- section Collection specimen relations
- section Organisms and identifications
- section Specimen parts and storage

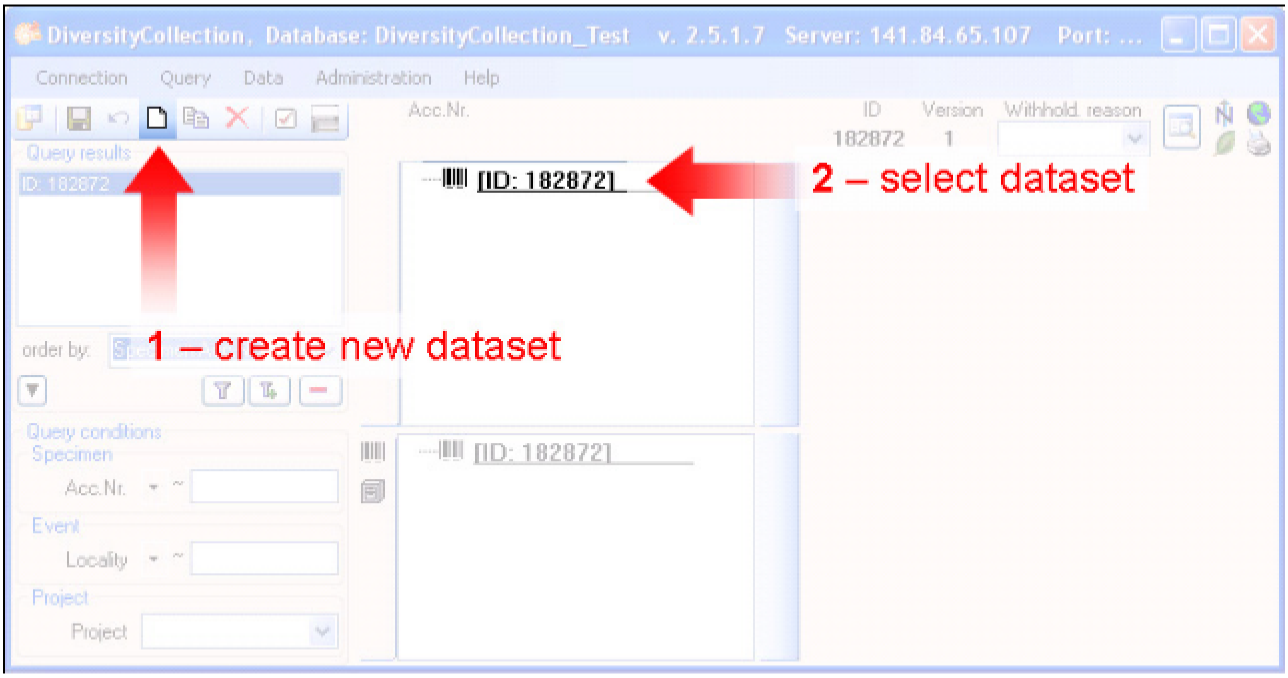
Tutorial - collection event

To enter a new dataset, click on the 🗋 button in the upper left panel (see point **1** in image below). In case there are accession numbers in the database, the software will ask whether you want to take the next free number (see accession for further information). If you click on the OK button, the program will try to find the next free accession number starting with your current accession number.


Accession number

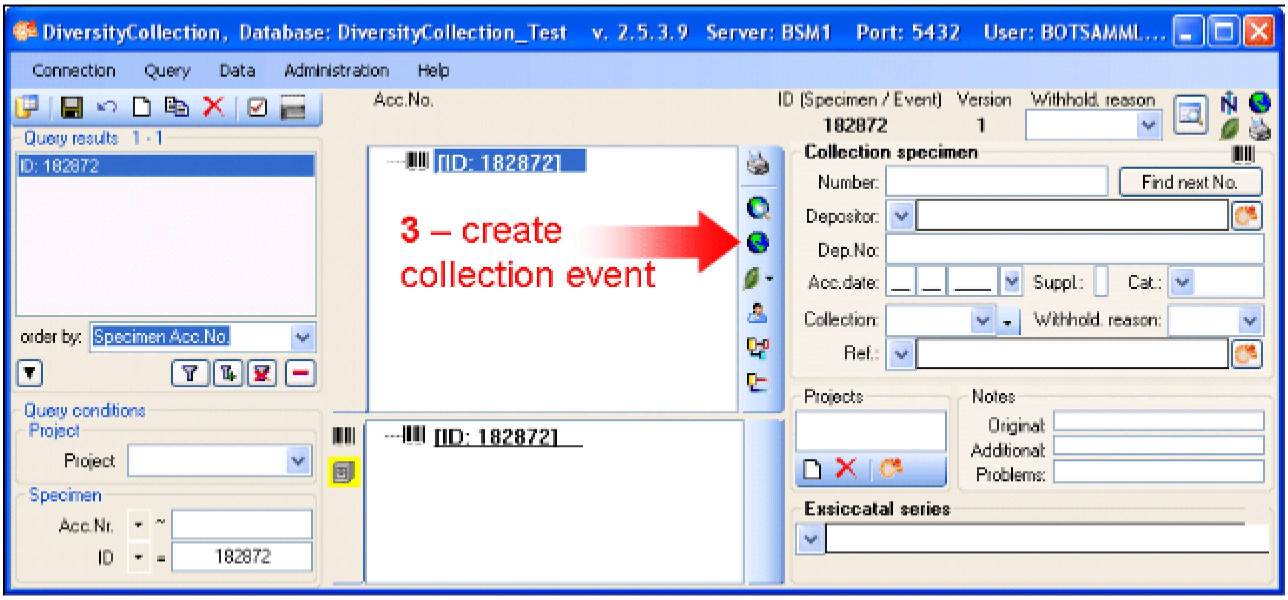
Do you want the database to search for the next free accession number after M-0003940

Finally you will find a new entry in the specimenlist on the left and the trees for the specimen (see point **2** in image below) and the storage as shown below.


1 – create new dataset

2 – select dataset

If you did not specify an accession number the entries will look like in the image above, otherwise the accession number will be shown. To enter your data for the specimen, click on the entry in the upper tree as shown below. This will open the fields where you can enter the details for the specimen in the area right from the tree.


DiversityCollection, Database: DiversityCollection_Test v. 2.5.3.9 Server: BSM1 Port: 5432 User: BOTSAMML...

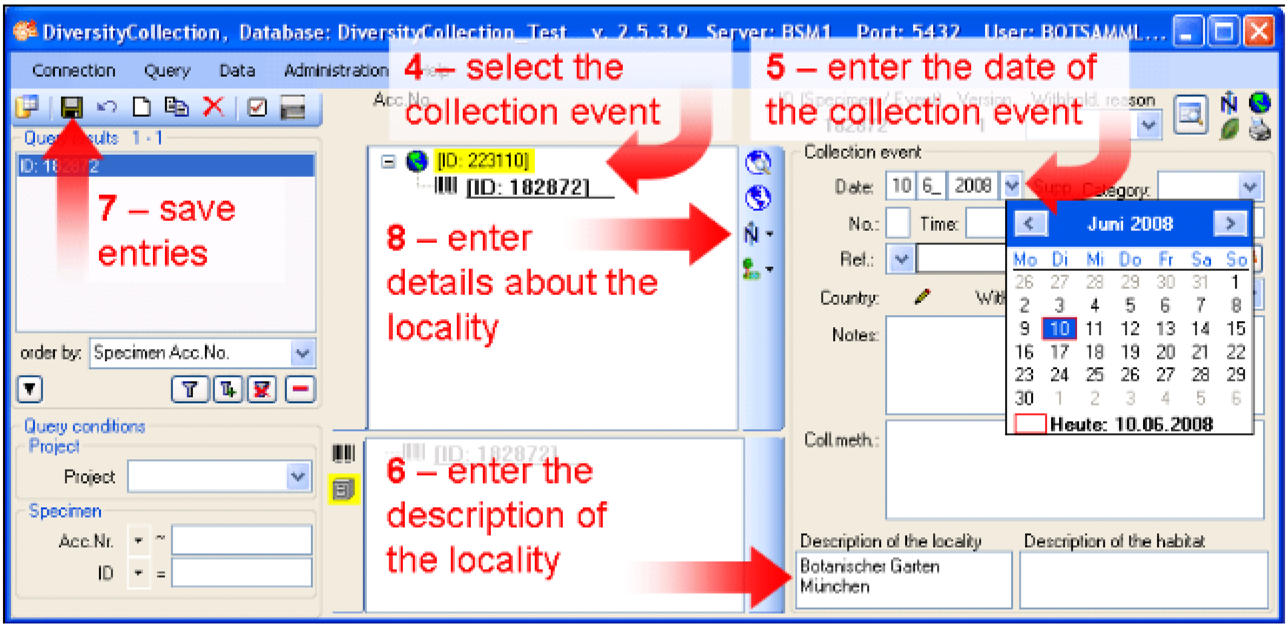
3 – create collection event

In the panel in the middle of the form, several buttons will appear where you can enter additional informations to this specimen. To enter information about the collection event (when and where the specimen was collected) click on the button (see point **3** in image above). This will add an entry for the collection event in the upper tree as shown below. Select this entry in the tree (see point **4** in image below), to open the fields for the collection event. To see the projected contents of any data field, simply place your mouse in the field. A explanation will appear like for the field **Description of the locality**:


Locality description of the locality, exactly as written on the original label (i.e. without corrections during data entry)

See the event part for further details.

Then enter the date (see point **5** in image below) of the collection event. If you click on the drop down button as shown in the image below, a calendar will open where you can select the date. Then enter the description of the locality (see point **6** in image below). To store the data entered so far, click on the button (see point **7** in image below).


DiversityCollection, Database: DiversityCollection_Test v. 2.5.3.9 Server: BSM1 Port: 5432 User: BOTSAMML...

4 – select the collection event

5 – enter the date of the collection event

7 – save entries

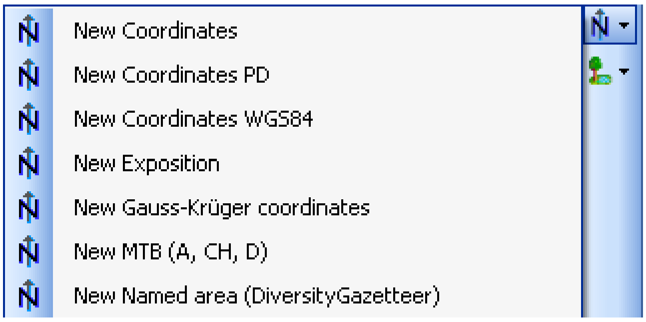
8 – enter details about the locality

6 – enter the description of the locality

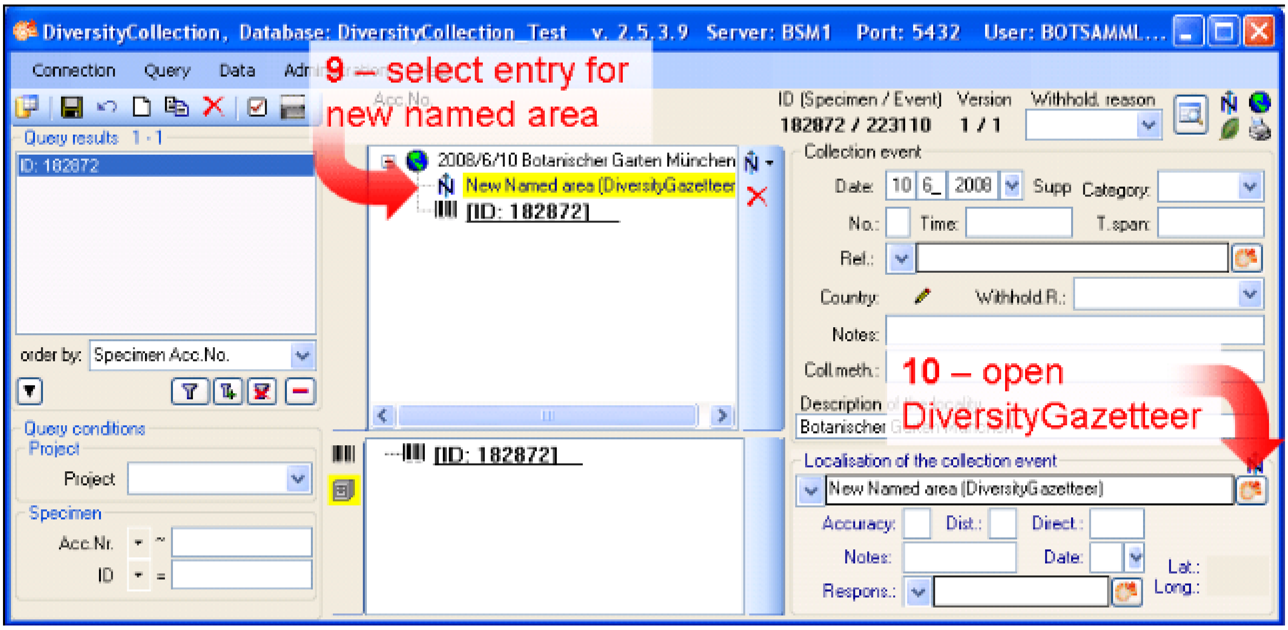
Date: 10 6 2008

Description of the locality: Botanischer Garten München

To enter coordinates, named places etc. click on the button (see point **8** in image above) and select an option from the list.

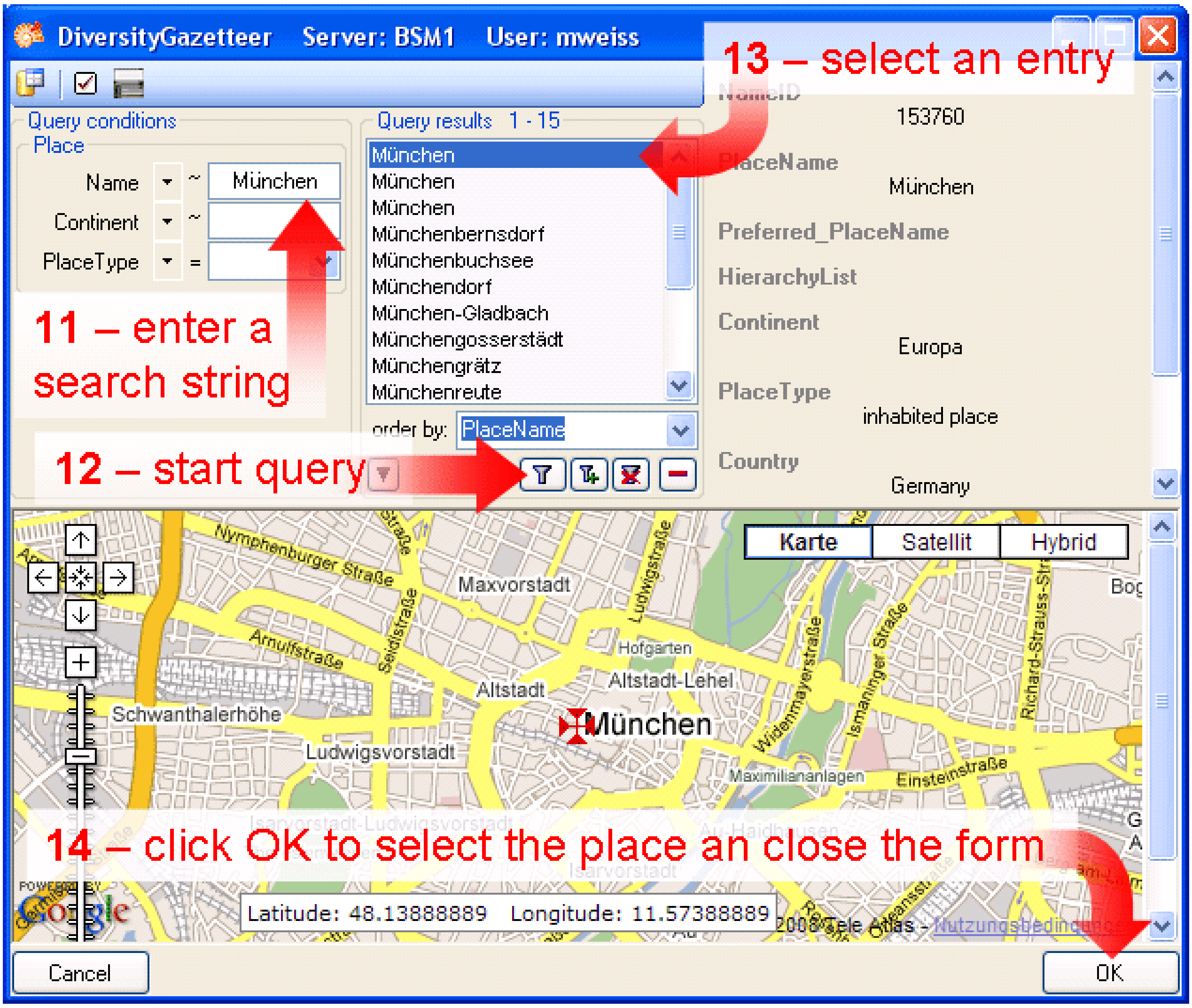


To enter a name of the place using the DiversityGazetteer, choose **New Named area (DiversityGazetteer)** from the list. In the overview tree in the middle of the window an entry will be inserted as shown below. Select it to open the detail fields for this entry (see point **9** in image below).


9 – select entry for new named area

10 – open DiversityGazetteer

To open the connection to the DiversityGazetteer, click on the button (see point **10** in image above). A window as shown below will open. Enter a search string for e.g. the city you want to find (see point **11** in image below) and start the query with a click on the button (see point **12** in image below).



13 – select an entry

11 – enter a search string

12 – start query

14 – click OK to select the place an close the form

Name ~ München

Continent ~

PlaceType =

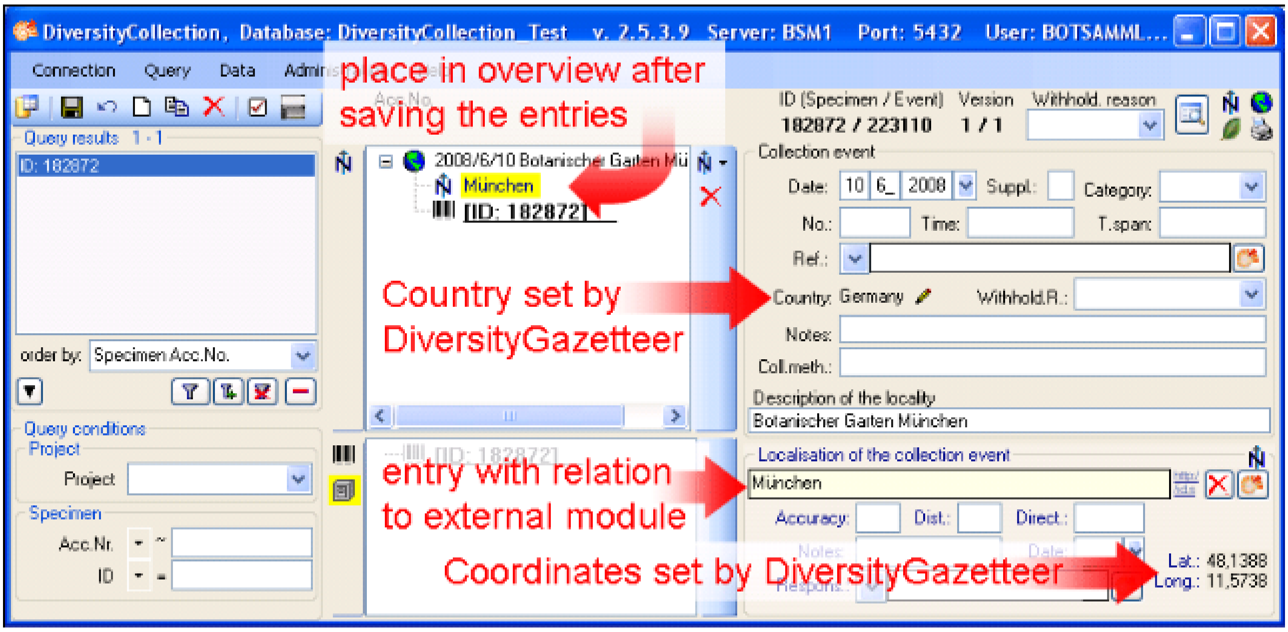
München
München
München
Münchenbernsdorf
Münchenbuchsee
Münchendorf
München-Gladbach
Münchengosserstädt
Münchengrätz
Münchenreute

order by: PlaceName

NameID	153760
PlaceName	München
Preferred_PlaceName	
HierarchyList	
Continent	Europa
PlaceType	inhabited place
Country	Germany

Latitude: 48.13888889 Longitude: 11.57388889

In the middle of the form, the results of the query will be listed. Select on of these. To guide you to the correct entry, details to this place are listed in the area right from the list and the base will show a map corresponding to the coordinates connected to this entry. After selecting the correct entry (see point **13** in image above) click on the OK button to return to the main window (see point **14** in image above). As shown below the data retrieved from the gazetteer will be written in several areas. Next to the name of the place the DiversityGazetteer provides the coordinates and the country as shown below.



DiversityCollection, Database: DiversityCollection_Test v. 2.5.3.9 Server: BSM1 Port: 5432 User: BOTSAMML...

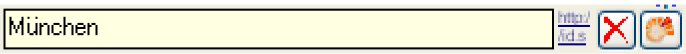
ID: 182872

order by: Specimen Acc.No.

2008/6/10 Botanischer Garten Mü
München
[ID: 182872]

ID (Specimen / Event) 182872 / 223110
Version 1 / 1
Date: 10 6_ 2008
Country: Germany
Description of the locality: Botanischer Garten München
München
Lat.: 48,1388
Long.: 11,5738

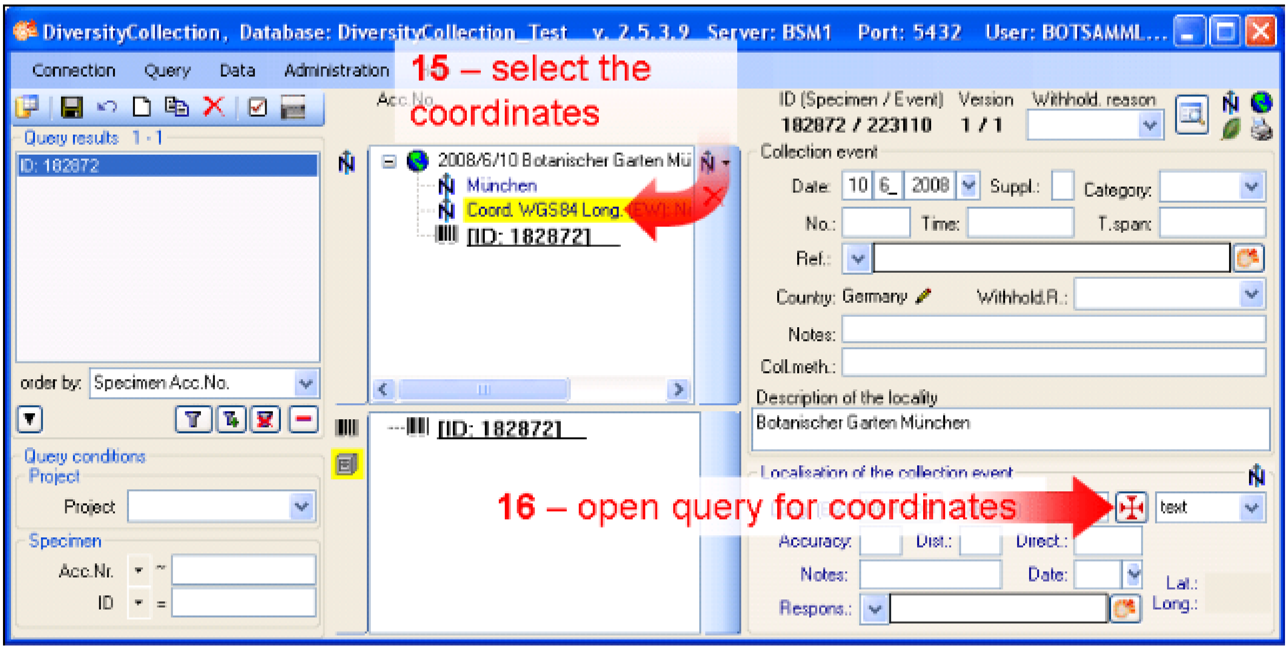
The area where you entered the name now changed to a locked state and will prevent you from changing the entry (see image below). Next to the field with the place you find the link to the external module. Double-click it for more details.



München

If you want to remove the connection to the external module click on the ✕ button. This will keep all entries (country, place, coordinates) but remove the connection to DiversityGazetteer.

Now lets add the exact coordinates for the locality with the assistance of Google Maps. Click on the N button (see point **8** above) and choose **New Coordinates WGS84** (Google Maps uses WGS84). This will add a new entry in the overview. Select it (see point **15** in the image below) to open the details for this entry. Here click on the ⌖ button (see point **16** in image below).



DiversityCollection, Database: DiversityCollection_Test v. 2.5.3.9 Server: BSM1 Port: 5432 User: BOTSAMML...

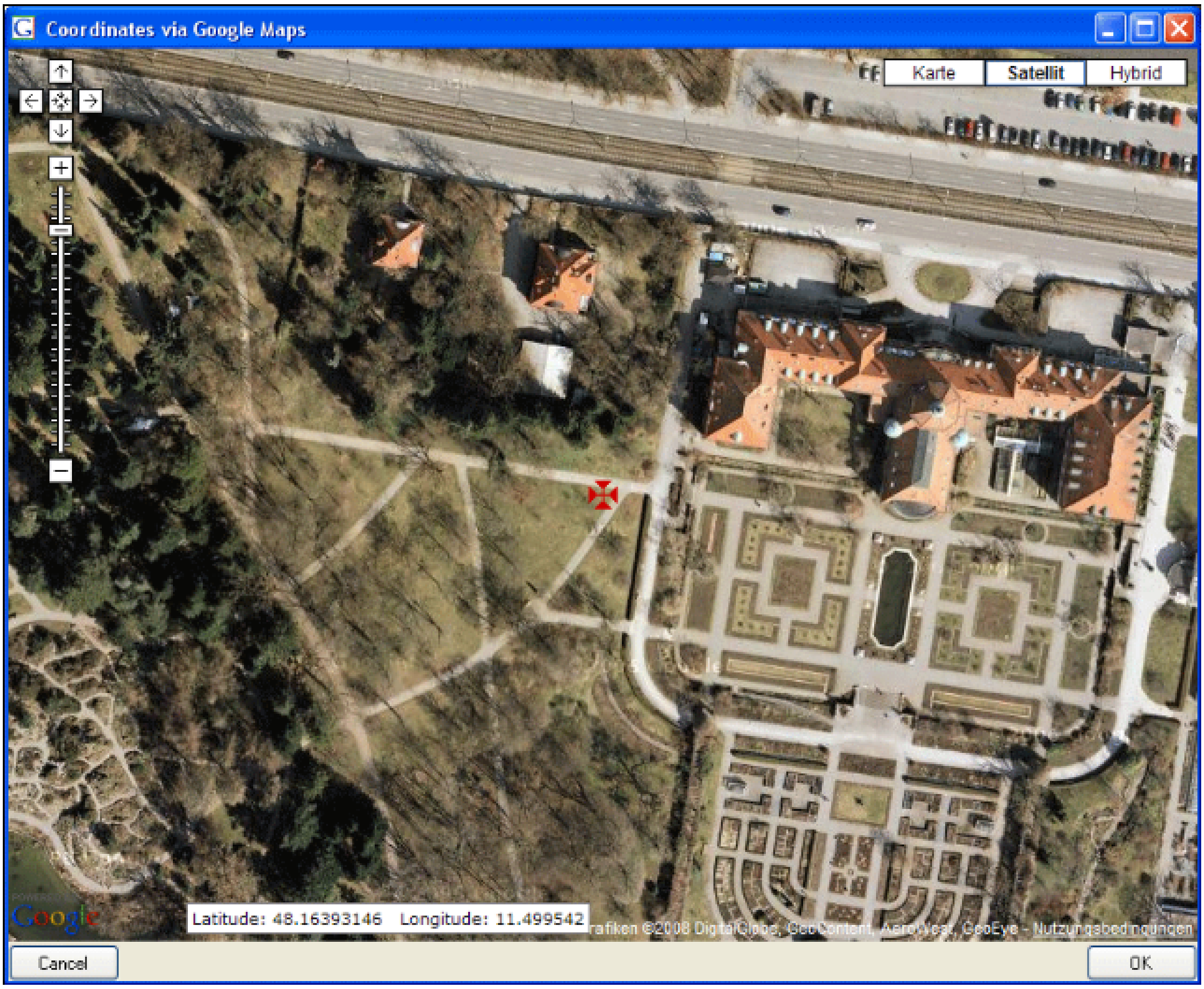
ID: 182872

order by: Specimen Acc.No.

2008/6/10 Botanischer Garten Mü
München
Coord. WGS84 Long. (E/W): N
[ID: 182872]

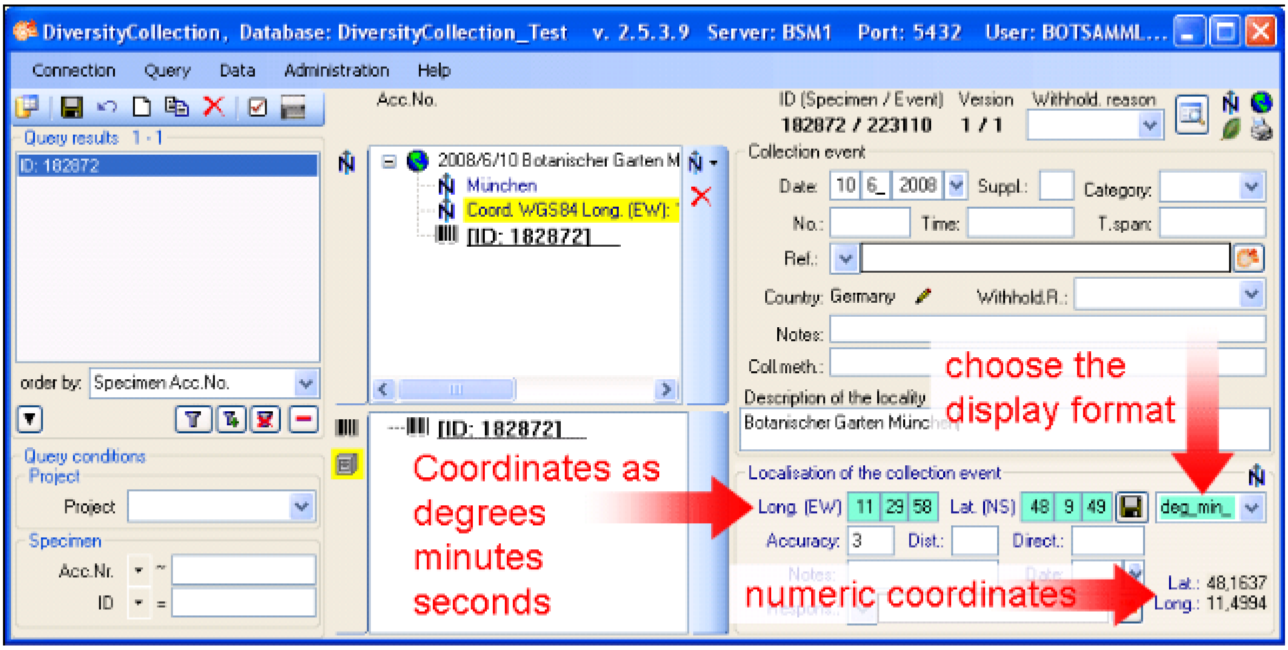
ID (Specimen / Event) 182872 / 223110
Version 1 / 1
Date: 10 6_ 2008
Country: Germany
Description of the locality: Botanischer Garten München
text

A window as shown below will open where you can set the coordintes simply by dragging the map with your mouse. The coordinates correspond to the center of the map, symbolized with the ✠. Click on the OK button to store the coordinates.



Latitude: 48.16393146 Longitude: 11.499542

In the main window as shown below the coordinates will be stored at two positions - see image below. In the upper area, you can set the values an choose a different format for display as shown here the more familiar form with degrees, minutes and seconds. You change the values and click on the button, to change the original entry. In parallel the numeric values are stored in fields that can not be edited by the user (see below).



DiversityCollection, Database: DiversityCollection_Test v. 2.5.3.9 Server: BSM1 Port: 5432 User: BOTSAMML...

ID: 182872

order by: Specimen Acc.No.

2008/6/10 Botanischer Garten M
München
Coord. WGS84 Long. (EW): '
[ID: 182872]

ID (Specimen / Event) 182872 / 223110
Version 1 / 1
Withhold. reason

Date: 10 6_ 2008

Country: Germany

Description of the locality: Botanischer Garten München

Localisation of the collection event

Long. (EW) 11 29 58 Lat. (NS) 48 9 49 deg_min_

Accuracy: 3

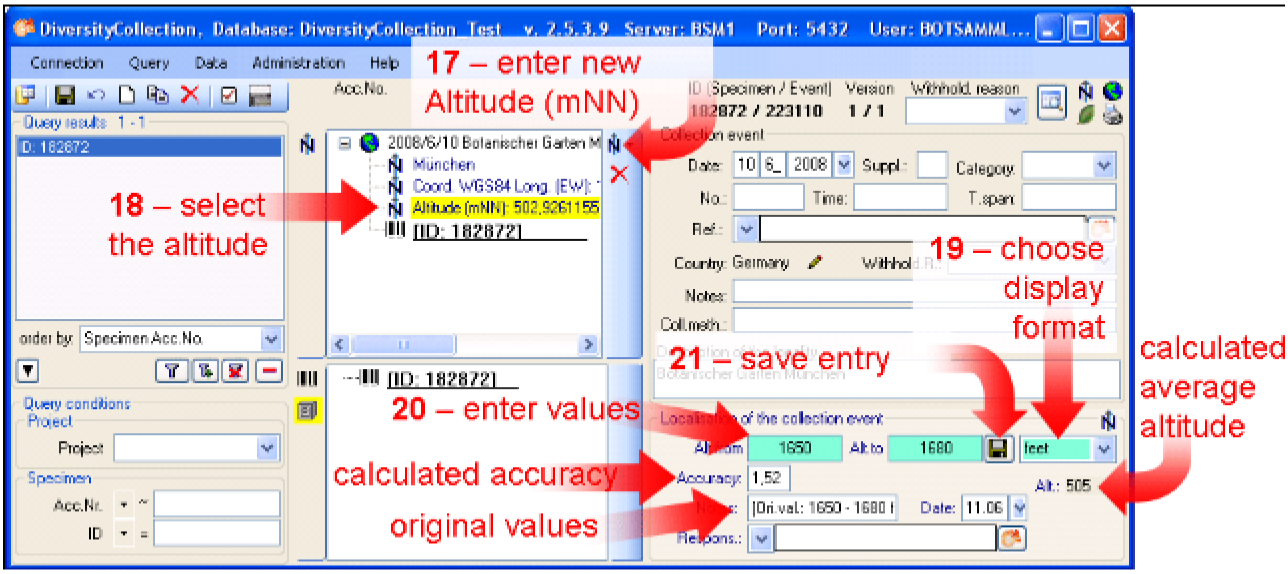
Lat.: 48,1637
Long.: 11,4994

choose the display format

Coordinates as degrees minutes seconds

numeric coordinates

As a last information about the locality, we enter the altitude. Click on the button (see point **8** above) and choose **New Altitude (mNN)** (see point **17** in the image below). Then select the new entry in the overview to open the datafields (see point **18** in the image below). Lets suppose, you have only feet values available - so change the display format to feet (see point **19** in the image below). Enter your values (see point **20** in the image below) and click on the 💾button (see point **21** in the image below) to save your entries. Now your values are converted to meter, the internal format of DiversityCollection. The program calculates an average value for the altitude and an accuracy in meter corresponding to the accuracy of your original values (see below). The original values of your entry are saved in the **Notes** field.



DiversityCollection, Database: DiversityCollection_Test v. 2.5.3.9 Server: BSM1 Port: 5432 User: BOTSAMML...

ID: 182872

order by: Specimen Acc.No.

2008/6/10 Botanischer Garten M
München
Coord. WGS84 Long. (EW): '
Altitude (mNN): 502,9261155
[ID: 182872]

ID (Specimen / Event) 182872 / 223110
Version 1 / 1
Withhold. reason

Date: 10 6_ 2008

Country: Germany

Description of the locality: Botanischer Garten München

Localisation of the collection event

Alt. from 1650 Alt. to 1680 feet

Accuracy: 1,52

Notes: [Ori.val.: 1650 - 1680 f

Date: 11.06

Alt.: 505

17 – enter new Altitude (mNN)

18 – select the altitude

19 – choose display format

21 – save entry

20 – enter values

calculated accuracy

original values

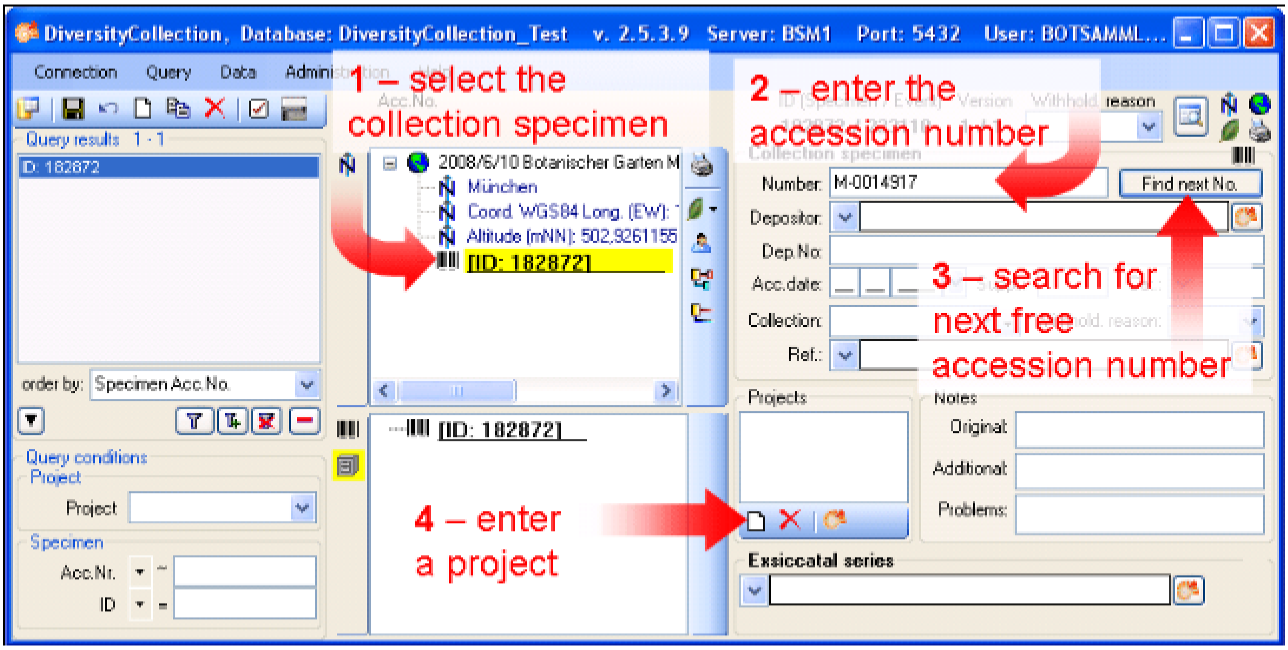
calculated average altitude

Next we turn to the collection specimen and set the accession number in the first section listed below.

- section Collection specimen
- section Organisms and identifications
- section Specimen parts and storage

Tutorial - collection specimen

To set the accession number for the collection specimen, select it in the overview (see point **1** in image below) enter the accession number (see point **2** in image below).



DiversityCollection, Database: DiversityCollection_Test v. 2.5.3.9 Server: BSM1 Port: 5432 User: BOTSAMML...

1 – select the collection specimen

2 – enter the accession number

3 – search for next free accession number

4 – enter a project

Query results 1 - 1

ID: 182872

order by: Specimen Acc.No.

2008/6/10 Botanischer Garten M

München

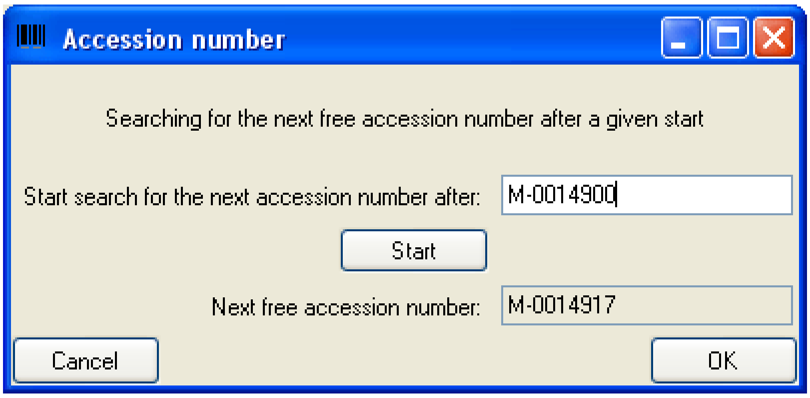
Coord. WGS84 Long. (EW):

Altitude (mNN): 502.9261155

[ID: 182872]

Number: M-0014917

To search for the next free accession number, click on the corresponding button as shown above (see point **3** in image above). A window as shown below will open. Start the search for a free accession number. If the query ended successful, click **OK** to take the new accession number in your dataset.



Accession number

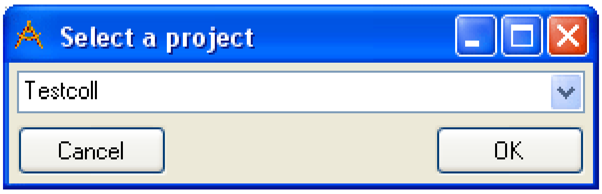
Searching for the next free accession number after a given start

Start search for the next accession number after: M-0014900

Next free accession number: M-0014917

Project

To restrict the access to your dataset, add it to a project (click on the 🗋button - see point **4** in image above). A dialog will open where you can select a project from the projects defined in DiversityCollection (see image below). The project will then be added to the list of the projects for this specimen.

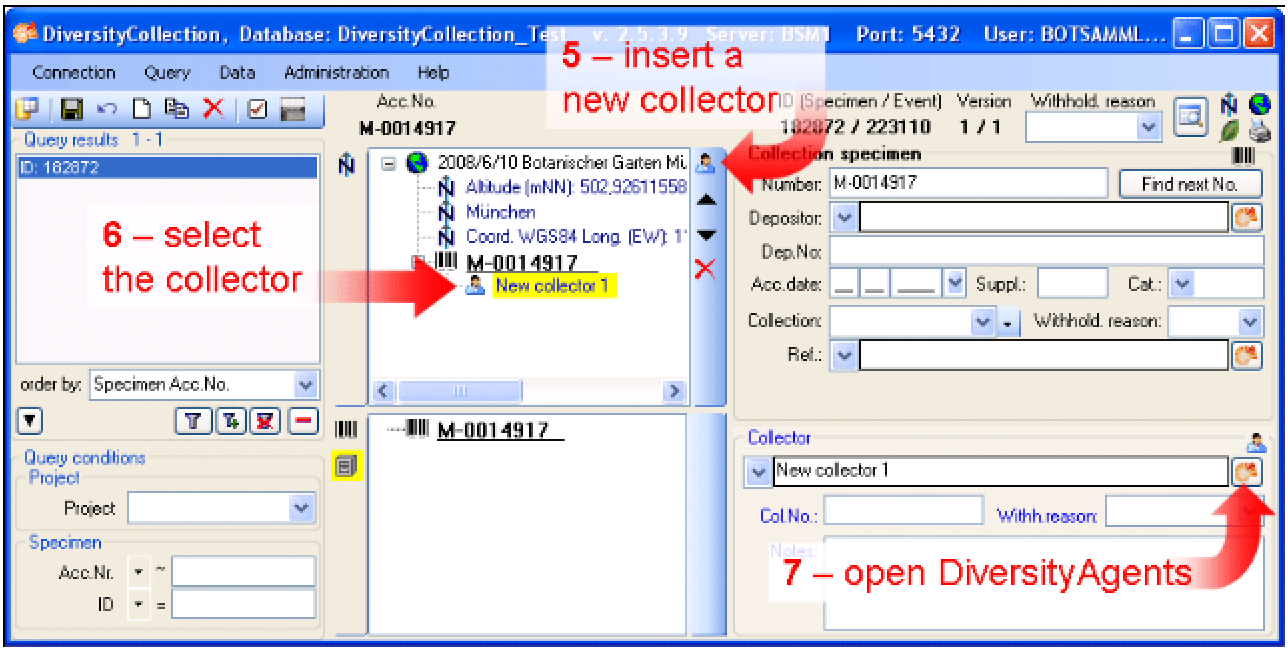


Select a project

Testcoll

Collectors

Now we will add the collectors of the specimen. In the overview, select the specimen (see point **1** above) then click on the button to insert a new collector (see point **5** in image below). Select the collector in the overview (see point **6** in image below). Now we use the module DiversityAgents to search for a certain person. Click on the button to open the interface to the module (see point **7** in image below).



5 – insert a new collector

6 – select the collector

7 – open DiversityAgents

ID: 182872

order by: Specimen Acc.No.

Project:

Acc.Nr. ~

ID =

Acc.No: M-0014917

ID (Specimen / Event): 182872 / 223110

Version: 1 / 1

2008/6/10 Botanischer Garten Mü

Altitude (mNN): 502,92611558

München

Coord. WGS84 Long. (EW): 1

M-0014917

New collector 1

M-0014917

Number: M-0014917

Depositor:

Dep.No:

Acc.date:

Suppl.:

Cat.:

Collection:

Withhold. reason:

Rel.:

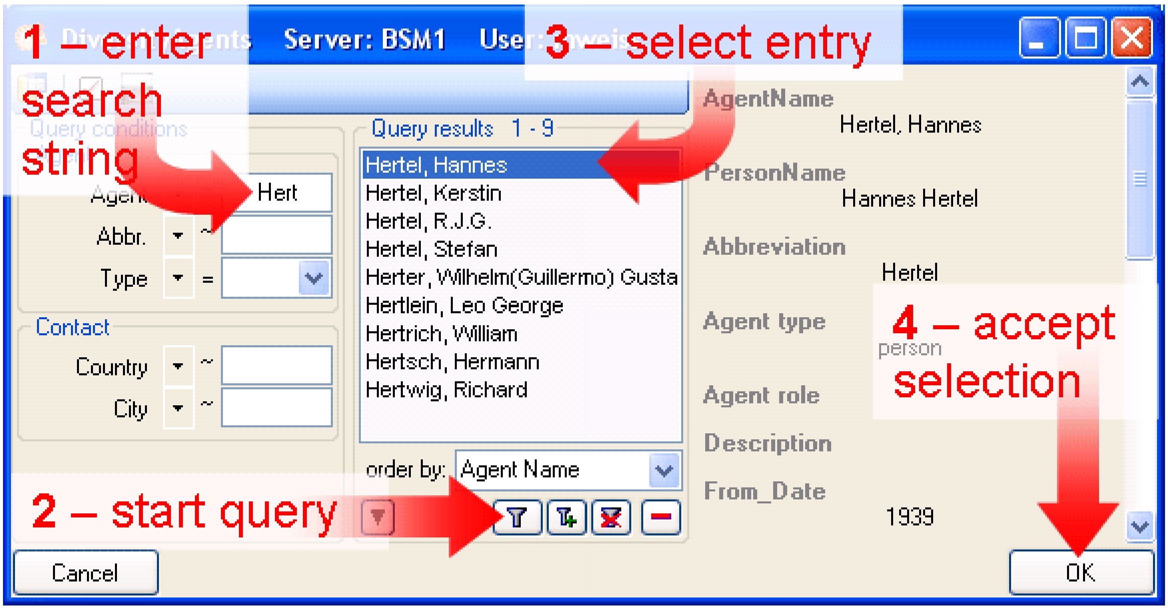
Collector: New collector 1

Col.No.:

Withh.reason:

Notes:

In the interface for DiversityAgents, enter search criteria (see point **1** in image below) and click on the button to start the query (see point **2** in image below).



1 – enter search string

2 – start query

3 – select entry

4 – accept selection

Agent ~ Hert

Abbr. ~

Type =

Country ~

City ~

Hertel, Hannes
Hertel, Kerstin
Hertel, R.J.G.
Hertel, Stefan
Herter, Wilhelm(Guillermo) Gusta
Hertlein, Leo George
Hertrich, William
Hertsch, Hermann
Hertwig, Richard

order by: Agent Name

AgentName: Hertel, Hannes

PersonName: Hannes Hertel

Abbreviation: Hertel

Agent type: person

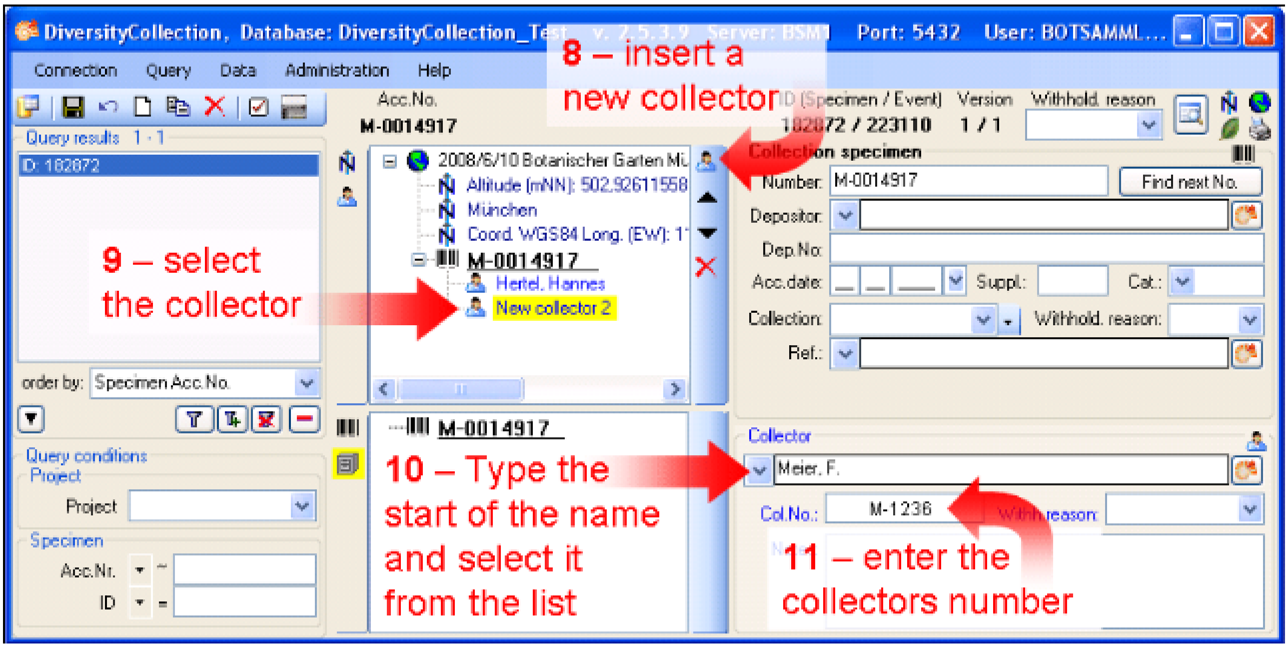
Agent role:

Description:

From_Date: 1939

Select the correct entry from the query result (see point **3** in image above) and click on the OK button (see point **4** in image above) to store the name in DiversityCollection.

The next collector will have no connection to the module DiversityAgents. To insert this collector, again click on the button (see point **8** in image below), select it (see point **9** in image below), type the start of the name in the field (in this example "Mei" would be a good choice) for the name and click on the drop down button (see point **10** in image below) to select a name from the list of collectors already stored in the database. Finally if the collector has a field number, enter this field number of this collector (see point **11** in image below).



Acc.No.: M-0014917

order by: Specimen Acc.No.

Number: M-0014917

Collector: Meier, F.

Col.No.: M-1236

8 – insert a new collector

9 – select the collector

10 – Type the start of the name and select it from the list

11 – enter the collectors number

This tutorial is continued in the sections listed below:

- section Collection specimen relations
- section Organisms and identifications
- section Specimen parts and storage

Tutorial - relations between specimen

There are two types of relations possible:

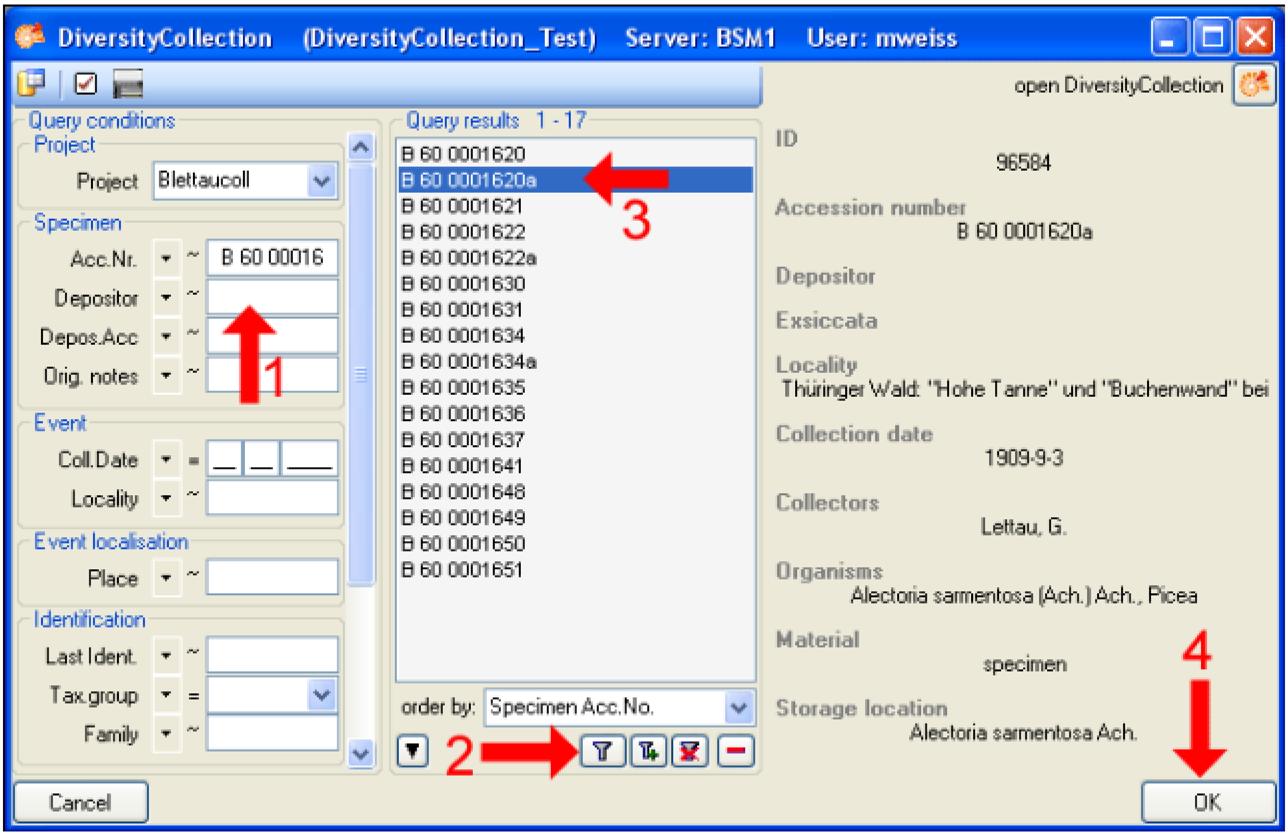
1. relation to a specimen within DiversityCollection
2. relation to a specimen not administrated in the local database.

1. Internal relations

To enter a relation to a specimen in DiverisityCollection select the specimen in the tree (see point **1** in image below) and click on the button (see point 2 in image below).

1908/9/27 Thüringer Wald: "Hohe Tanne" und "Buchenwand" bei Stützerbach, 750 m
Altitude (mNN): 750 m NN
Greenwich Coordinates Long. (EW): 10.8625 Lat. (NS): 50.6364
Stützerbach, Ilm-Kreis, Germany
B 60 0001620
Picea
Picea sp.
Alectoria sarmentosa (Ach.) Ach.
Alectoria sarmentosa (Ach.) Ach. [respons.: Sipman, H.]
Alectoria sarmentosa Ach. [respons.: Sipman, H.]

A window will open where you can search for the related specimen. In the window enter your restrictions (see point **1** in image below), start the query (see point **2** in image below), select the related specimen from the result list (see point **3** in image below) and click OK (see point **4** in image below) to insert the relation.



DiversityCollection (DiversityCollection_Test) Server: BSM1 User: mweiss

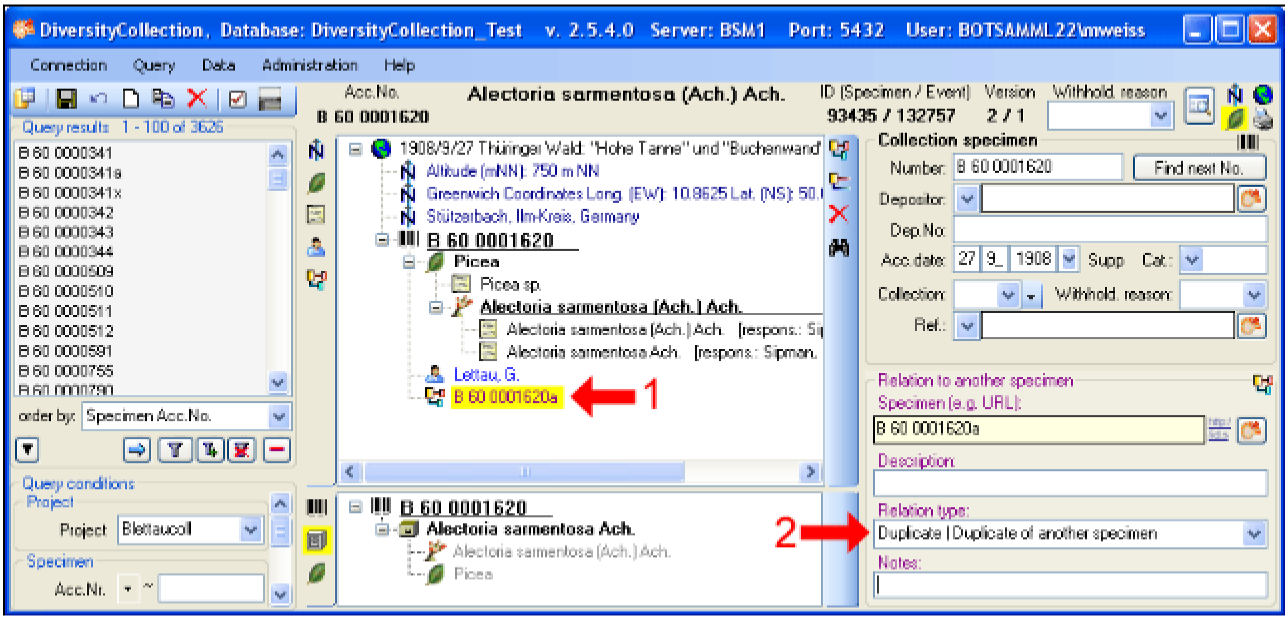
Query conditions
Project
Project: Blettaucoll
Specimen
Acc.Nr. ~ B 60 00016
Depositor ~
Depos.Acc ~
Orig. notes ~
Event
Coll.Date =
Locality ~
Event localisation
Place ~
Identification
Last Ident. ~
Tax.group =
Family ~

Query results 1 - 17
B 60 0001620
B 60 0001620a
B 60 0001621
B 60 0001622
B 60 0001622a
B 60 0001630
B 60 0001631
B 60 0001634
B 60 0001634a
B 60 0001635
B 60 0001636
B 60 0001637
B 60 0001641
B 60 0001648
B 60 0001649
B 60 0001650
B 60 0001651

order by: Specimen Acc.No.

ID: 96584
Accession number: B 60 0001620a
Depositor
Exsiccata
Locality: Thüringer Wald: "Hohe Tanne" und "Buchenwand" bei
Collection date: 1909-9-3
Collectors: Lettau, G.
Organisms: Alectoria sarmentosa (Ach.) Ach., Picea
Material: specimen
Storage location: Alectoria sarmentosa Ach.

In the window select the entry for the relation (see point **1** in image below) to display the fields for the details. Then enter the type of the relation (see point **2** in image below).



DiversityCollection, Database: DiversityCollection_Test v. 2.5.4.0 Server: BSM1 Port: 5432 User: BOTSAMML22\mweiss

Query results 1 - 100 of 3626

B 60 0000341
B 60 0000341a
B 60 0000341x
B 60 0000342
B 60 0000343
B 60 0000344
B 60 0000509
B 60 0000510
B 60 0000511
B 60 0000512
B 60 0000591
B 60 0000755

order by: Specimen Acc.No.

Query conditions

Project: Blettaucoll

Acc.No.: B 60 0001620

Alectoria sarmentosa (Ach.) Ach.

ID (Specimen / Event): 93435 / 132757

Version: 2 / 1

1908/9/27 Thüringer Wald: "Hohe Tanne" und "Buchenwand"
Altitude (mNN): 750 m NN
Greenwich Coordinates Long (EW): 10.8625 Lat. (NS): 50.
Stützerbach, Ilm-Kreis, Germany
B 60 0001620
Picea
Picea sp.
Alectoria sarmentosa (Ach.) Ach.
Alectoria sarmentosa (Ach.) Ach. [respons.: Si
Alectoria sarmentosa Ach. [respons.: Sipman,
Lettau, G.
B 60 0001620a

1

B 60 0001620
Alectoria sarmentosa Ach.
Alectoria sarmentosa (Ach.) Ach.
Picea

2

Collection specimen

Number: B 60 0001620

Acc.date: 27 9_ 1908

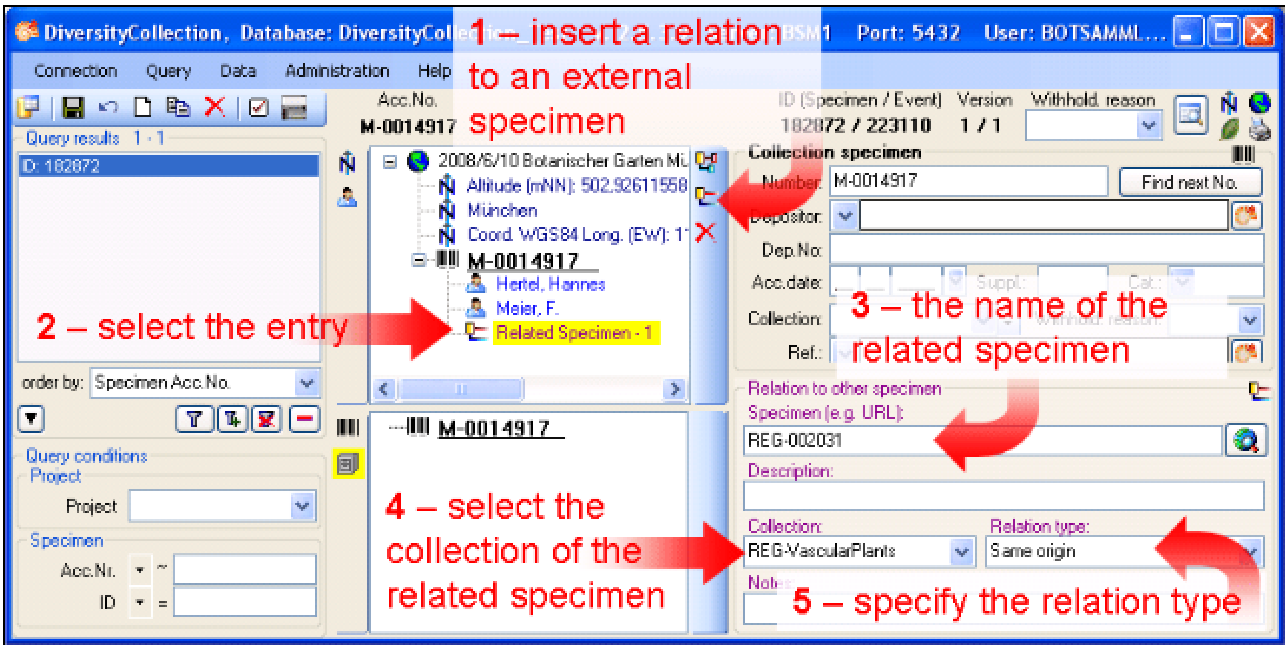
Relation to another specimen

Specimen (e.g. URL): B 60 0001620a

Relation type: Duplicate | Duplicate of another specimen

2. External relations

To enter a relation to a specimen in a foreign collection, insert a relation (see point **1** in image below) and select it in the overview (see point **2** in image below). Enter the name of the specimen (see point **3** in image below) and the type of the relation (see point **5** in image below). .



DiversityCollection, Database: DiversityCol... Port: 5432 User: BOTSAMML...

1 – insert a relation to an external specimen

2 – select the entry

3 – the name of the related specimen

4 – select the collection of the related specimen

5 – specify the relation type

Query results 1 - 1

ID: 182872

order by: Specimen Acc.No.

Acc.No.: M-0014917

ID (Specimen / Event): 182872 / 223110

Version: 1 / 1

2008/6/10 Botanischer Garten Mü
Altitude (mNN): 502.92611558
München
Coord. WGS84 Long. (EW): 1
M-0014917
Hertel, Hannes
Meier, F.
Related Specimen - 1

M-0014917

Collection specimen

Number: M-0014917

Relation to other specimen

Specimen (e.g. URL): REG-002031

Collection: REG-VascularPlants

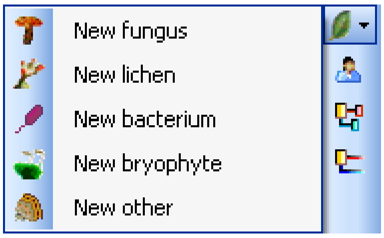
Relation type: Same origin

If there is a dataset for the collection available you can select it from the list (see point **4** in image above). Otherwise you first have to add this collection to the list. If you have the permissions to edit the collections choose Administration -> Collections from the menu to add a collection. See the section collection for details.

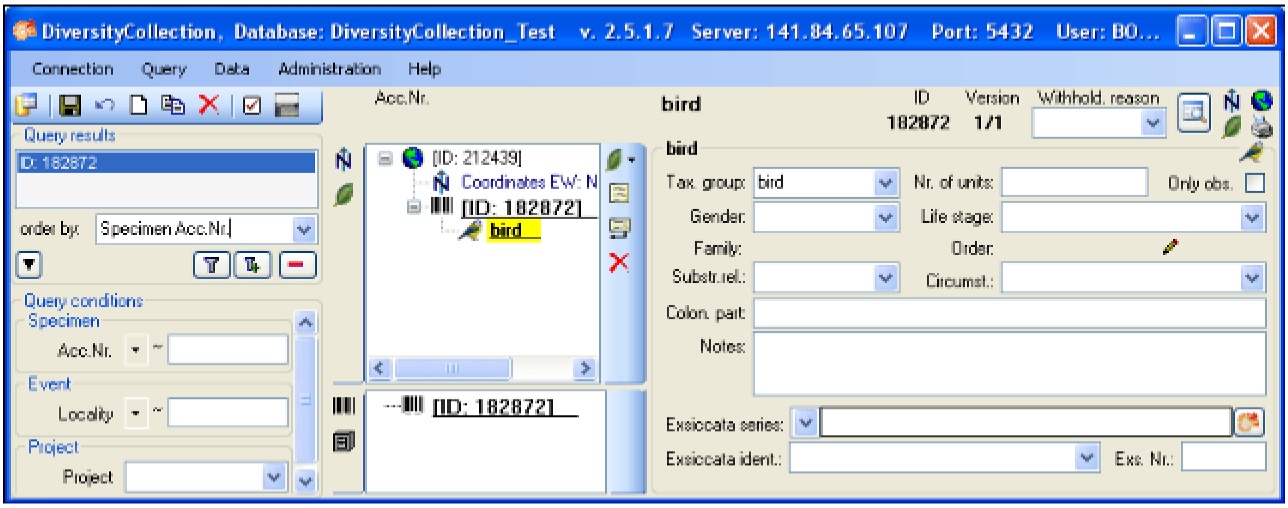
For further informations about the relations turn to the section relation.

Tutorial - organisms and identifications

To enter the organism, choose the specimen entry in the tree. Then select the organism from the list.



This will enter an entry for the organism unterneath the entry of the specimen as shown below. To enter details for this organism, select the entry in the tree.



ID: 182872

order by: Specimen Acc.Nr.

[ID: 212439]
Coordinates EW: N
[ID: 182872]
bird

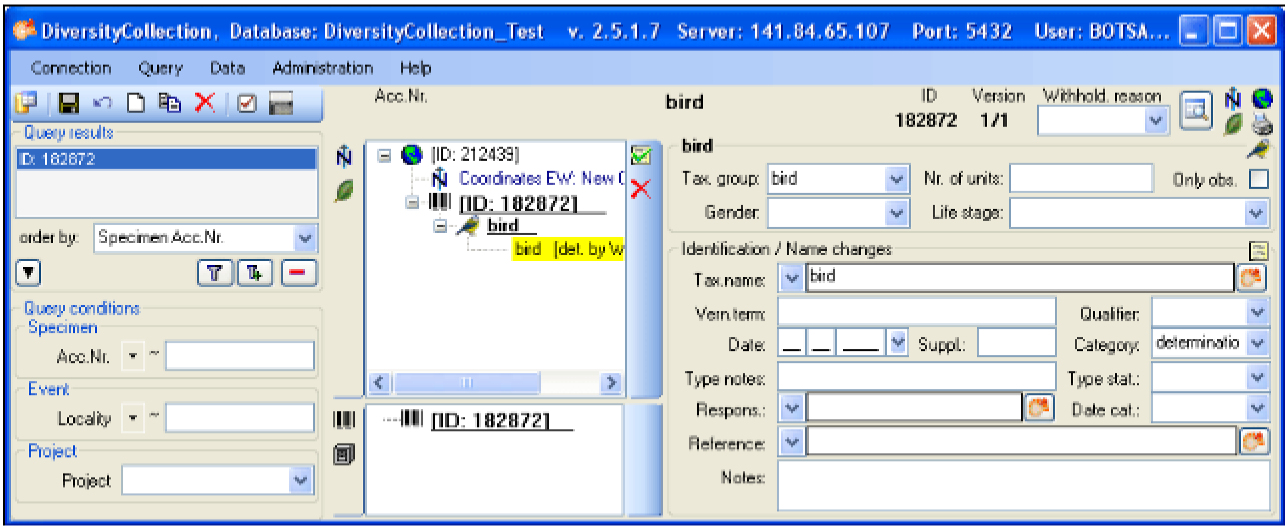
bird

ID 182872 Version 1/1

bird

Tax. group: bird

To enter an identification, click on the buttom. This will insert a dataset for the idenfication of the organism underneath the organism as shown below. Select this entry to enter the details of the identification.



ID: 182872

order by: Specimen Acc.Nr.

[ID: 212439]
Coordinates EW: New (
[ID: 182872]
bird
bird [det. by W

bird

ID 182872 Version 1/1

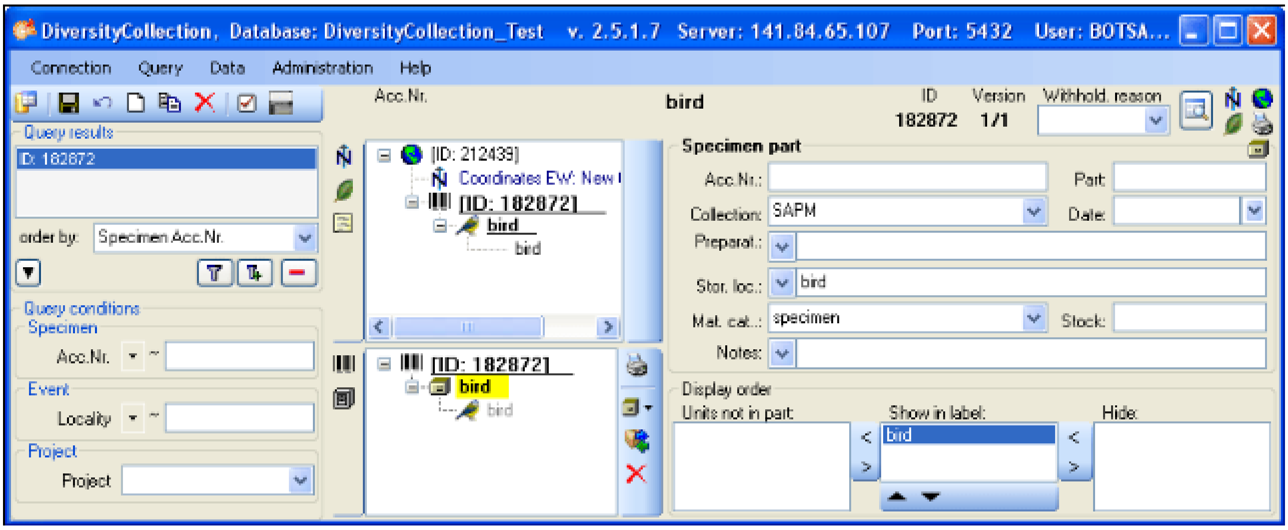
bird

Tax. group: bird

Tax.name: bird

Category: determinatio

As a last step, enter the data connected with the storage of the specimen. In the bottom tree, select the entry for the specimen and than select a material category from the list. This will enter a dataset for a specimen part underneath the specimen as shown below. Select this entry to edit the data for the collection, the storage location etc.



DiversityCollection, Database: DiversityCollection_Test v. 2.5.1.7 Server: 141.84.65.107 Port: 5432 User: BOTSA...

Query results: ID: 182872

order by: Specimen Acc.Nr.

[ID: 212439]
Coordinates EW: New
[ID: 182872]
bird
bird

[ID: 182872]
bird
bird

Acc.Nr.: bird
ID: 182872
Version: 1/1

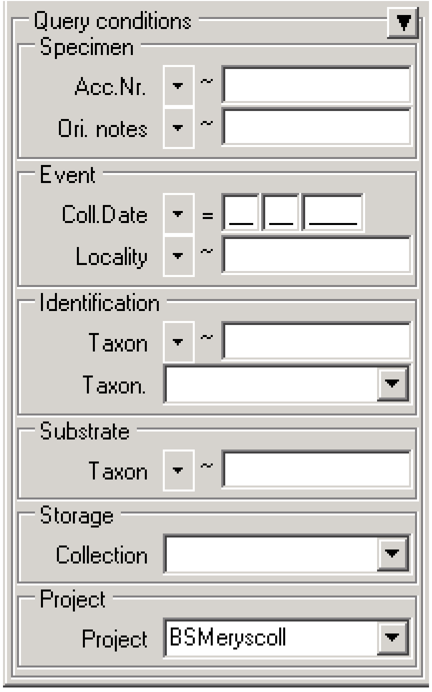
Specimen part
Collection: SAPM
Stor. loc.: bird
Mat. cat.: specimen

Display order
Show in label: bird

Queries - overview

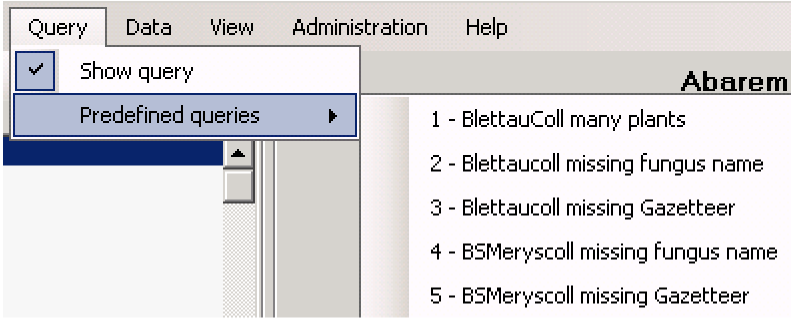
To search for specimens in the database you can choose 3 options:

With the user defined queries, you can define any query condition - this is the default query mode.

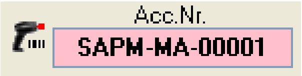


Project BSMeryscoll

The predefined queries are defined by the system administrator and are accessible via the menu **Query** - **Predefined queries**. To return to the userdefined click on the **Show query conditions** ▤button.



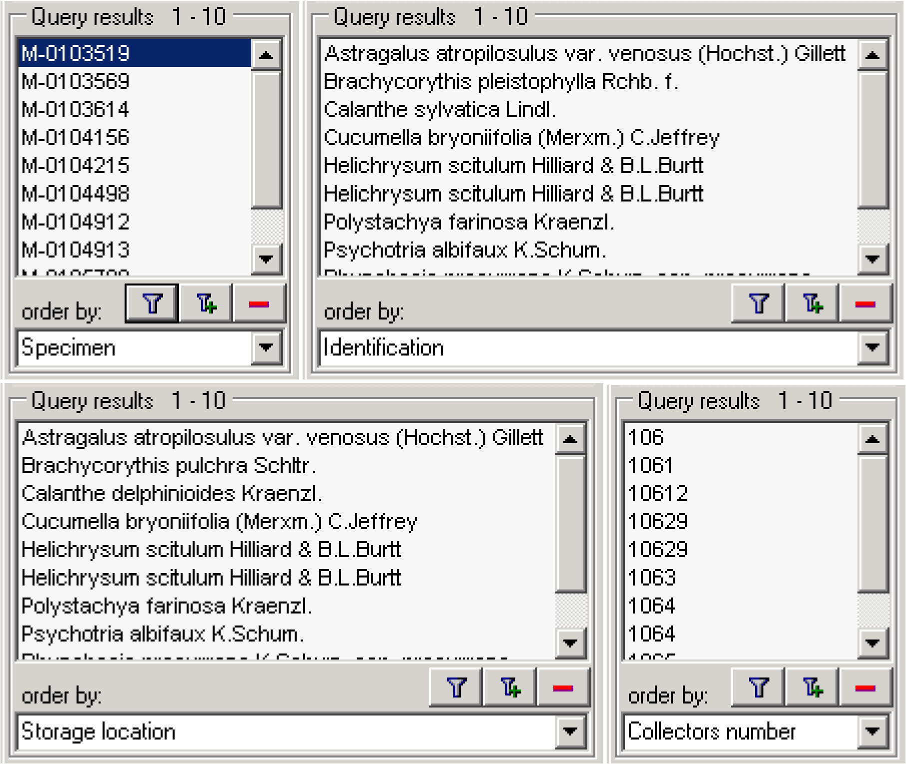
With the scan mode you can use a barcode scanner to search for a specimen. To work with the scan mode, select the **Scan mode** in the **Query** menu. To return to another query mode, deselect the Scan mode.



Acc.Nr. SAPM-MA-00001

Result list

The result list displays the specimens found in a query.

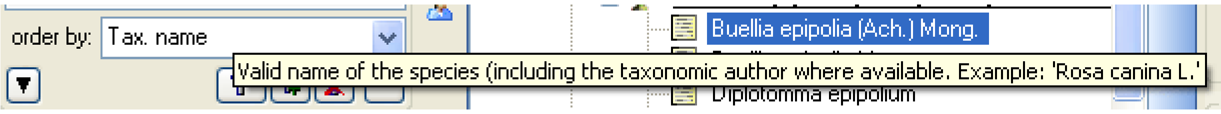

Query results 1 - 10
M-0103519
M-0103569
M-0103614
M-0104156
M-0104215
M-0104498
M-0104912
M-0104913
order by: Specimen

Query results 1 - 10
Astragalus atropilosulus var. venosus (Hochst.) Gillett
Brachycorythis pleistophylla Rchb. f.
Calanthe sylvatica Lindl.
Cucumella bryoniifolia (Merxm.) C.Jeffrey
Helichrysum scitulum Hilliard & B.L.Burtt
Helichrysum scitulum Hilliard & B.L.Burtt
Polystachya farinosa Kraenzl.
Psychotria albifaux K.Schum.
order by: Identification

Query results 1 - 10
Astragalus atropilosulus var. venosus (Hochst.) Gillett
Brachycorythis pulchra Schltr.
Calanthe delphinioides Kraenzl.
Cucumella bryoniifolia (Merxm.) C.Jeffrey
Helichrysum scitulum Hilliard & B.L.Burtt
Helichrysum scitulum Hilliard & B.L.Burtt
Polystachya farinosa Kraenzl.
Psychotria albifaux K.Schum.
order by: Storage location

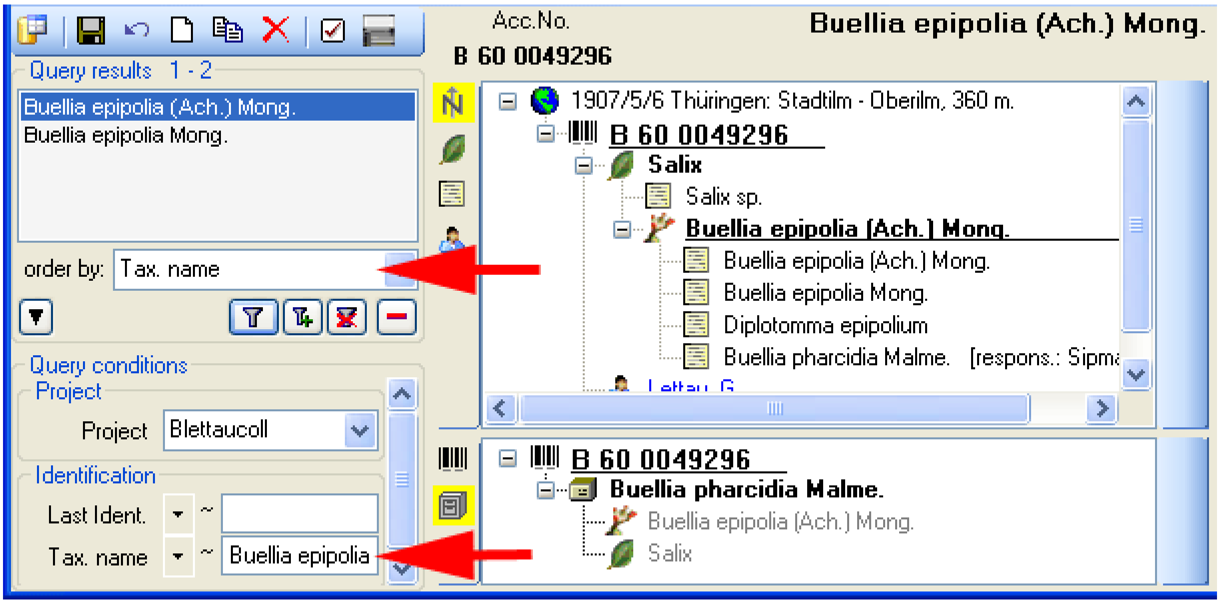
Query results 1 - 10
106
1061
10612
10629
10629
1063
1064
1064
order by: Collectors number

The specimens can for example be shown with their accession number, their identifications or their storage location etc. as shown in the images above. To get further informations about the chosen field, just place the mouse in the field. A text box will appear with the description of the field (see below).


order by: Tax. name
Buellia epipolia (Ach.) Mong.
Valid name of the species (including the taxonomic author where available. Example: 'Rosa canina L.'
Diplotomma epipolium

You can restrict the maximal number of specimens together with the query options (click on the ☑ button), for example if you have a slow connection to the database. As a default the maximal number is set to 100. If the number of datasets according to your query is higher than the maximal value set in the query options this will be indicated in the header of the list.

To ensure, that restrictions set in the query conditions will be applied to the specimen list make sure that you choose matching restictions and order columns as shown below. In the upper example corresponding fields where used for restricting the query and the display (**Tax. name**). Here the Query results will be restricted to this field.



Acc.No. B 60 0049296 — Buellia epipolia (Ach.) Mong.

Query results 1 - 2:
- Buellia epipolia (Ach.) Mong.
- Buellia epipolia Mong.

order by: Tax. name

Project: Blettaucoll

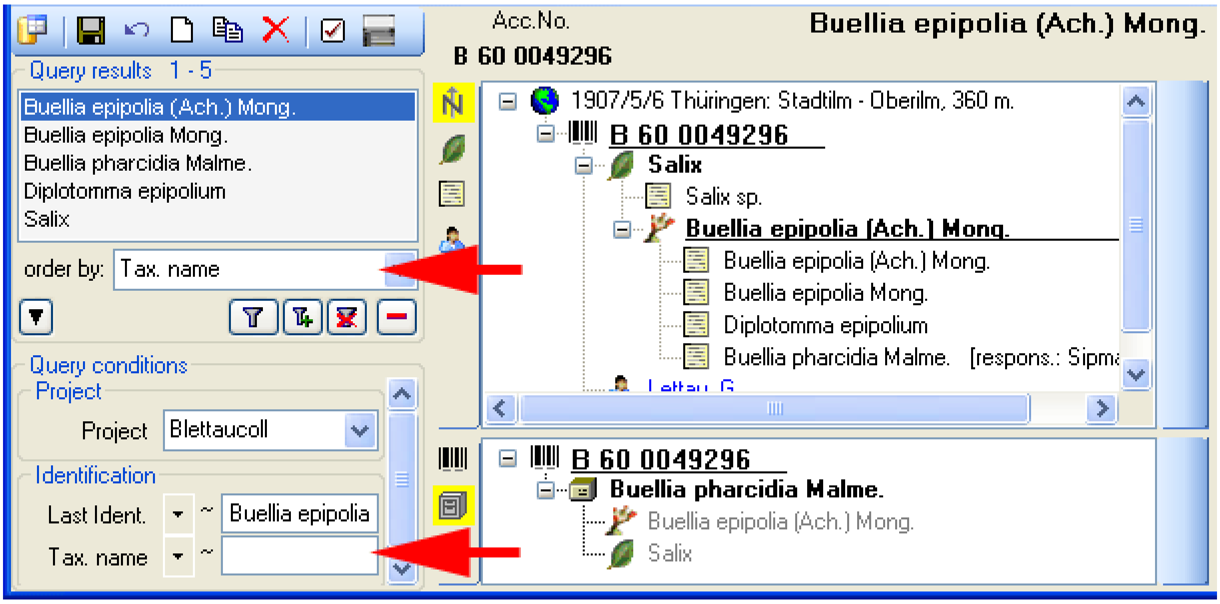
Last Ident. ~

Tax. name ~ Buellia epipolia

1907/5/6 Thüringen: Stadtilm - Oberilm, 360 m.
- B 60 0049296
  - Salix
    - Salix sp.
  - Buellia epipolia (Ach.) Mong.
    - Buellia epipolia (Ach.) Mong.
    - Buellia epipolia Mong.
    - Diplotomma epipolium
    - Buellia pharcidia Malme. [respons.: Sipma

B 60 0049296
- Buellia pharcidia Malme.
  - Buellia epipolia (Ach.) Mong.
  - Salix

In the second example a different field for the restiction was chosen (**Last ident.** <> **Tax. name**). The query result in consequence will list all entries found in the field **Tax. name** from the datasets where on entry matches the restriction (see below).



Acc.No. B 60 0049296 — Buellia epipolia (Ach.) Mong.

Query results 1 - 5:
- Buellia epipolia (Ach.) Mong.
- Buellia epipolia Mong.
- Buellia pharcidia Malme.
- Diplotomma epipolium
- Salix

order by: Tax. name

Project: Blettaucoll

Last Ident. ~ Buellia epipolia

Tax. name ~

1907/5/6 Thüringen: Stadtilm - Oberilm, 360 m.
- B 60 0049296
  - Salix
    - Salix sp.
  - Buellia epipolia (Ach.) Mong.
    - Buellia epipolia (Ach.) Mong.
    - Buellia epipolia Mong.
    - Diplotomma epipolium
    - Buellia pharcidia Malme. [respons.: Sipma

B 60 0049296
- Buellia pharcidia Malme.
  - Buellia epipolia (Ach.) Mong.
  - Salix

To search for specimens, enter the restrictions in the fields for the search conditions and click on the ▽ button. The specimens found in the database will be shown in the result list. To add specimens with differing search conditions click on the ▽+ button. If the list of items is longer than your maximal number of returned items you can browse the next items with the ⇨ button. If you want to remove entries from the selected list, choose them in the list and click on the − button. This will not delete the data from the database, but remove them from your query result.

Here some examples you can select for display in the result list:

AccessionNumber: One entry is shown for each specimen with its corresponding accession number.

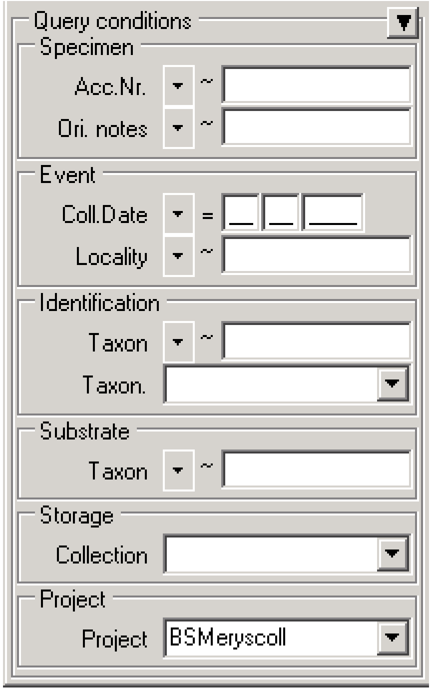
Last identification: The last identification for every unit in a specimen is shown in the list. As there can be several units in one specimen several entries for one specimen may appear in the list.

Storage location: The storage location of every part of a specimen stored in the collections is shown in the list. As parts of a specimen can be stored in several collections under different names several entries for one specimen may appear in the list.

Collecting number: The collecting number given by the collector of every sample of a specimen is shown in the list. A specimen can have several collectors each with different number. Therefore several entries for one collection specimen may appear in the list.

Query

There are two ways to search for specimens in a collection. The options for a fast search are displayed in the main window beneath the list of the items. You can change this arrangement using the / button to place the query options on the left side of the item list.



Project BSMeryscoll

To search for specimens enter the restrictions in the fields for the search conditions and click on the button. The specimens found in the database will be shown in the specimen list. To add specimens with differing search conditions click on the button. To clear all entries in the query fields use the button. If the list of items is longer than your maximal number of returned items you can browse the next items with the ⇨ button. To move back to the previous block of items click on the ⇦ button. If you want to remove entries from the selected list, choose them and click on the − button. This will not delete the data from the database, but remove them from your query result.

Within the query options you have several possibilities to specify your search restriction. Use the drop down button to change between the operator. The available operators are shown in the table below.

Operator	**Meaning**	**Example**
Text		
~	search for an entry like ...	Pinus s[iy]lvestris % (you can use wildcards)
=	search for an entry exactly equal to ...	Pinus silvestris L.
≠	search for an entry not like ...	Pinus s[iy]lvestris % (you can use wildcards)

∅	search for an entry where a value is missing ...	
•	search for an entry where a value is present ...	
-	search for an entry between ... and ...	2000 - 2005
Numeric		
=	search for an entry exactly equal to ...	2006
<	search for an entry lower than ...	2006
>	search for an entry bigger than ...	2006
-	search for an entry between ... and ...	2000 - 2005
∅	search for an entry where a value is missing ...	
•	search for an entry where a value is present ...	
Date		
=	search for an entry exactly equal to ...	20.3.2006
<	search for an entry lower than ...	20.3.2006
>	search for an entry bigger than ...	20.3.2006
Hierachy		
=	search for an entry exactly equal to ...	M-Fungi
≠	search for an entry that is not equal to ...	M-Fungi
∅	search for missing entry ...	M-Fungi
•	search for present entry ...	M-Fungi
Δ	search including childs in a hierarchy ...	M-Fungi

To hide the area containing the search fields click on the ▼ button. If the search area is hidden and you want to start a new search, just click on the ▲ button.

To change the displayed fields for searching specimens click on the ☑ button to change the query options.

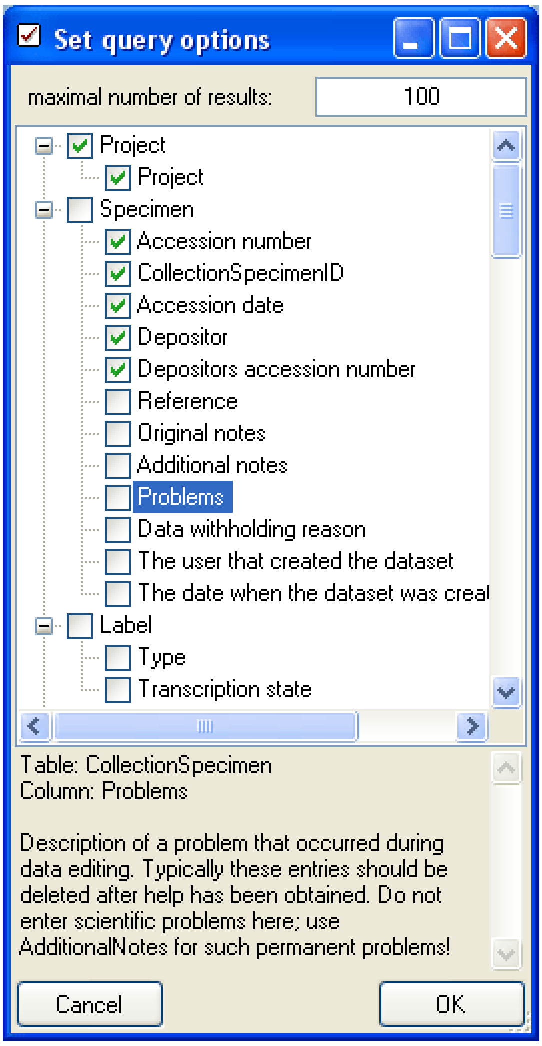
Scan mode

To search for a specimen with the help of a barcode-scanner select the **Scan mode** from the Query menu. The query part will be hidden and the field for the accession number will then be accessible for the entry with the scanner. If the field for the entry of the accession number Acc.Nr.: is not activated, move the mouse to the field to activate it. Then scan the barcode and the program will start the search for the specimen in the database.

Query options

The maximal number of items shown in a query result can be set in the window for the query options. The default value is set to 100. If you have a fast connection to your database or need to see more or less results, you may change this value to any number you like.

To change the displayed search fields click on the ☑ button. This opens a form where you can select and deselect the fields shown for searching specimens. You might also change the maximum number of items that will be shown in the result list.



maximal number of results: 100

- ☑ Project
  - ☑ Project
- ☐ Specimen
  - ☑ Accession number
  - ☑ CollectionSpecimenID
  - ☑ Accession date
  - ☑ Depositor
  - ☑ Depositors accession number
  - ☐ Reference
  - ☐ Original notes
  - ☐ Additional notes
  - ☐ Problems
  - ☐ Data withholding reason
  - ☐ The user that created the dataset
  - ☐ The date when the dataset was crea
- ☐ Label
  - ☐ Type
  - ☐ Transcription state

Table: CollectionSpecimen
Column: Problems

Description of a problem that occurred during data editing. Typically these entries should be deleted after help has been obtained. Do not enter scientific problems here; use AdditionalNotes for such permanent problems!

After having edited the query options click OK to store you selection. The new selection will become active for the next query.

Wildcards in SQL

There are 4 different possibilities for wildcards in SQL:

% any string consisting of no, one or many characters, e.g. Pinus **%** will find anything like Pinus, Pinus sylvestris, Pinus strobus etc.

***** any string consisting of no, one or many characters, e.g. Pinus ***** will find anything like Pinus, Pinus sylvestris, Pinus strobus etc.

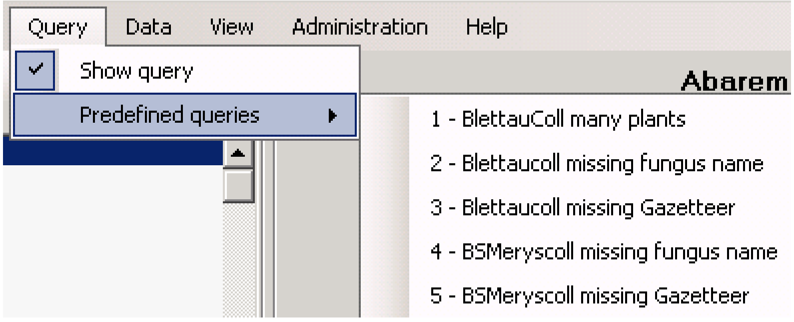
_ a single character, e.g. Pinus s**_**lvestris will find Pinus s**y**lvestris and Pinus s**i**lvestris etc.

[] any character out of a given range like **[abcde]** or **[a-e]**, e.g. Pinus s**[iy]**lvestris will find Pinus sylvestris and Pinus silvestris.

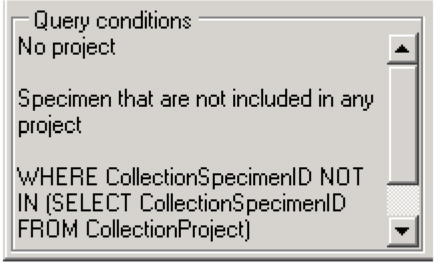
[^] any character not in a given range like **[^abcde]** or **[^a-e]**, e.g. Pinus s**[^i]**lvestris will find Pinus sylvestris but not Pinus silvestris.

Predefined queries

Besides setting querries for specimens via the query options you can define separate predefined user-specific queries. These are listed under the menu topic **Query - Predefined queries**.



If you choose one of these predefined queries, the query options will be hidden and the command of the query will be shown at the base of the specimen list. The first line shows the title of the query, the next lines contain the description followed by the part of the query command that restricts the selection of the datasets (= WHERE-clause of the SQL-statement).



Query conditions

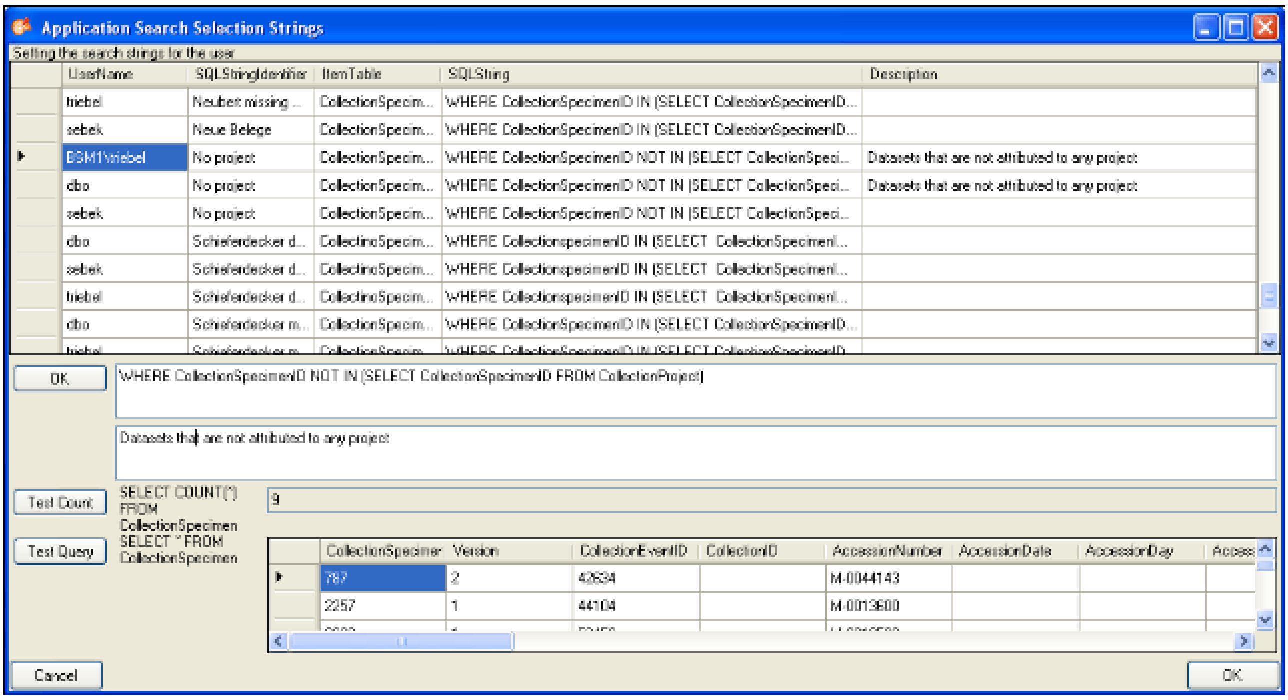
No project

Specimen that are not included in any project

WHERE CollectionSpecimenID NOT IN (SELECT CollectionSpecimenID FROM CollectionProject)

To return to the user defined query click on the **Show query conditions** ▤button.

If you are an administrator you can create new queries for users. To create a predefined query choose **Administration - Queries...** from the menu. A window as shown below will open, where you can create, edit and test your queries.



Setting the search strings for the user

UserName	SQLStringIdentifier	ItemTable	SQLString	Description
triebel	Neubert missing ...	CollectionSpecim...	WHERE CollectionSpecimenID IN (SELECT CollectionSpecimenID...	
sebek	Neue Belege	CollectionSpecim...	WHERE CollectionSpecimenID IN (SELECT CollectionSpecimenID...	
BSM1\triebel	No project	CollectionSpecim...	WHERE CollectionSpecimenID NOT IN (SELECT CollectionSpeci...	Datasets that are not attributed to any project
dbo	No project	CollectionSpecim...	WHERE CollectionSpecimenID NOT IN (SELECT CollectionSpeci...	Datasets that are not attributed to any project
sebek	No project	CollectionSpecim...	WHERE CollectionSpecimenID NOT IN (SELECT CollectionSpeci...	
dbo	Schieferdecker d...	CollectinoSpecim...	WHERE CollectionspecimenID IN (SELECT CollectionSpecimenI...	
sebek	Schieferdecker d...	CollectinoSpecim...	WHERE CollectionspecimenID IN (SELECT CollectionSpecimenI...	
triebel	Schieferdecker d...	CollectinoSpecim...	WHERE CollectionspecimenID IN (SELECT CollectionSpecimenI...	
dbo	Schieferdecker m...	CollectionSpecim...	WHERE CollectionSpecimenID IN (SELECT CollectionSpecimenID...	
triebel	Schieferdecker m...	CollectionSpecim...	WHERE CollectionSpecimenID IN (SELECT CollectionSpecimenID...	

```
WHERE CollectionSpecimenID NOT IN (SELECT CollectionSpecimenID FROM CollectionProject)
```

Datasets that are not attributed to any project

```
SELECT COUNT(*)
FROM
CollectionSpecimen
```

9

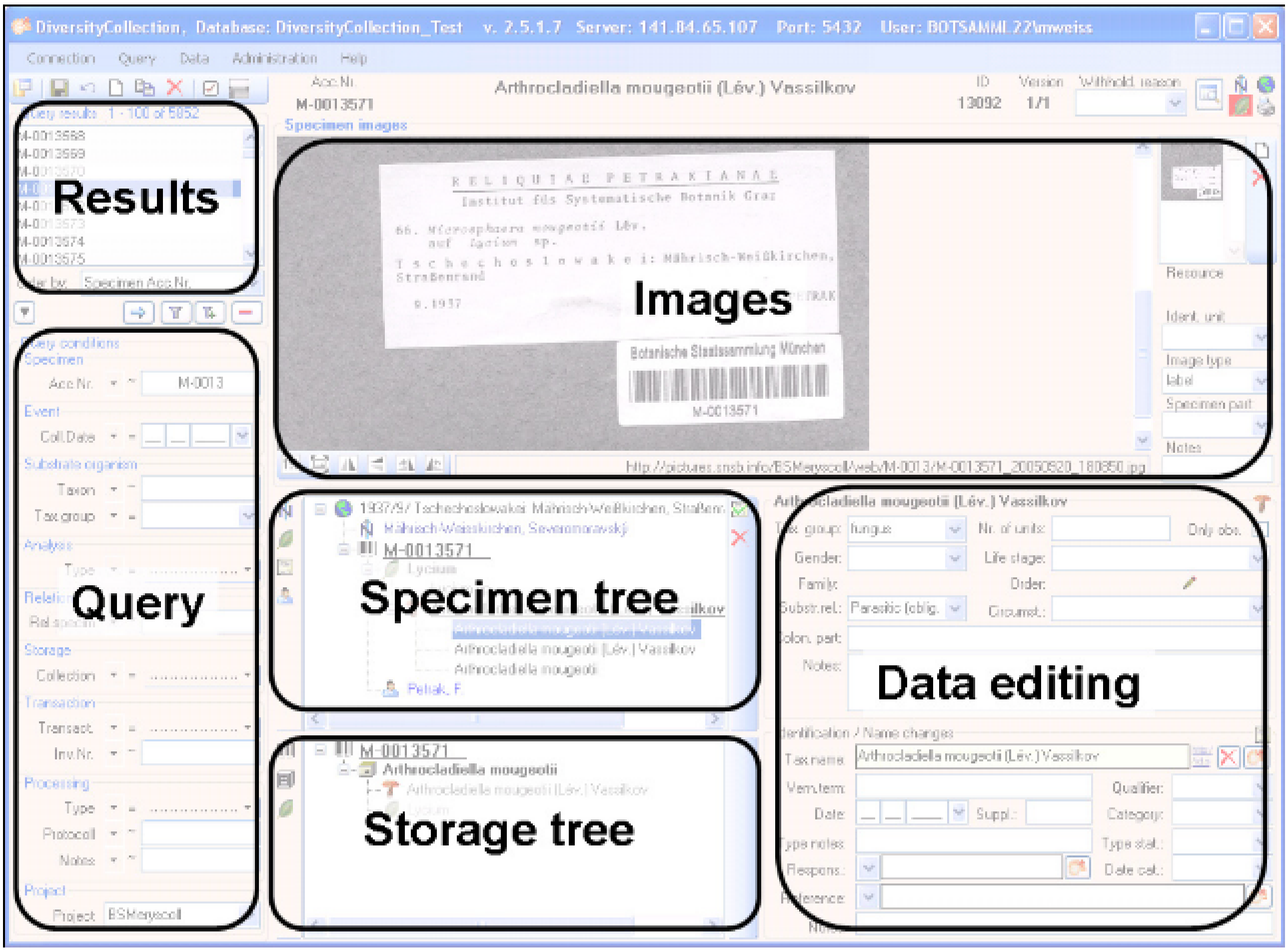
```
SELECT * FROM
CollectionSpecimen
```

CollectionSpecimen	Version	CollectionEventID	CollectionID	AccessionNumber	AccessionDate	AccessionDay	Access
787	2	42634		M-0044143			
2257	1	44104		M-0013600			

In the upper field you define the WHERE-clause of the SQL string of your query. Keep in mind that the queries can refer to different tables, depending on the order column chosen by the user. So queries in DiversityCollection should start with the reference to the primary key of the main table (CollectionSpecimenID in table CollectionSpecimen and depending tables). The lower field contains the description for the query as shown in the user interface. To test a query use the **[Test count]** and **[Test Query]** buttons.

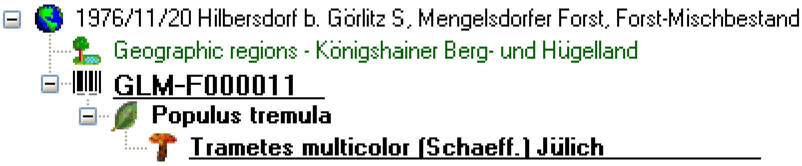
Editing the data

The main window of the DiversityCollection client contains two main areas. At the left you find the query and the results of this query. In the right part the data of the dataset selected in the result list is shown. The upper part of the data area shows the images, labels etc. In the lower part you find two trees that give you an overview and access to the data. The data of an entry selected in one of the trees are shown in the data editing part.



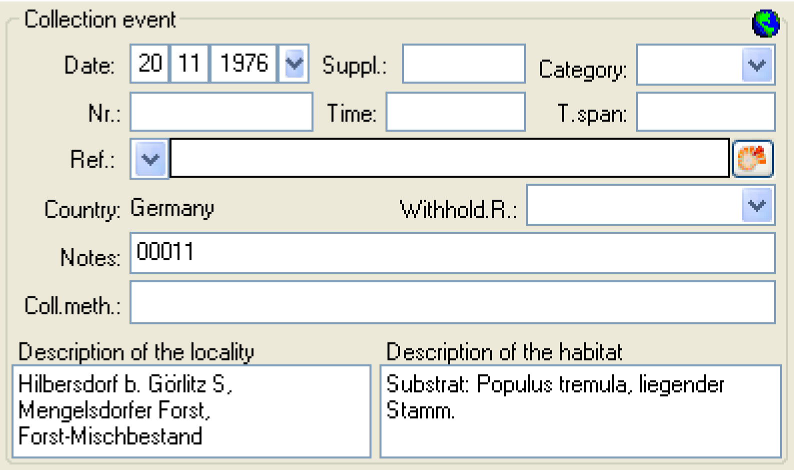
Collection event

Specimens stored in a collection are gathered during a collection event. This collection event keeps information about the geographic locality, the habitat, the collection date etc. During an collection event, several specimens may have been collected. If a specimen is not assigned to a collection event, you can assign the specimens to an existing event with a click on the button. To create a new event for a specimen click on the button. If you assign the specimen to an existing event, a window will open as shown below where you can search for the events already included in the database. Choose an event and click OK to assign the specimen to this event. In the tree view, the collection event is symbolized with an icon as shown below.



1976/11/20 Hilbersdorf b. Görlitz S, Mengelsdorfer Forst, Forst-Mischbestand
Geographic regions - Königshainer Berg- und Hügelland
GLM-F000011
Populus tremula
Trametes multicolor (Schaeff.) Jülich

To edit the data of the collection event, choose it in the tree view to open the detail fields as shown below. If the collection date does not correspond to a certain day, you may use the **Suppl.** field to enter e.g. a range or a series of dates or the **T.span** field to document a certain timespan.



Collection event
Date: 20 11 1976
Country: Germany
Notes: 00011
Description of the locality: Hilbersdorf b. Görlitz S, Mengelsdorfer Forst, Forst-Mischbestand
Description of the habitat: Substrat: Populus tremula, liegender Stamm.

The text shown in the tree view is composed of the date of the collection event and the description of the locality. For each collection event you can enter several geographical localisations and properties. To see the locality according to the coordinates stored in the database you can check the Maps. For each collection event you can enter images related to this event.

If other specimens were collected during the same collection event, this will be visible if you show the whole hierarchy of the event series. To do this click on the button in the panel on the left of the tree. See event series for further details. Here you can move a specimen to another event by drag and drop.

Data are stored in the table CollectionEvent.

Collection event series

If you need a hierarchical order of your collection events respectively to organise your collection events e.g. to document expeditions, you can do this with a collection event series. For a better differentation between events and collection event series you have a blue text in the hierarchy and the editing part and a different icon . A collection event series can contain other collection event series and collection events. Information about the geographic locality, properties of the collection site, the date of collecting etc. are stored in the collection event. To show or hide the collection event series you have two options. In the panel of the right of the tree the button will show the superior event series of the current collection event as shown below.

- 1986/2/4: Australia New South Wales Barrington Tops National Park. 4.2.1986
  - 1986/2/4: Australia New South Wales Barrington Tops National Park, Gloucester Tops, Negrohead Beech Forest Walking Trail. Altid.: ca. 1200 m; Koord.: 32°05' S, 151°35' E.
    - 1986/2/4 Australia New South Wales Barrington Tops National Park, Gloucester Tops, Negrohead Beech Forest Walking Trail. Altid.: ca. 1200 m; Koord.: 32°05' S, 151°35'
      - GR04228

The button will show the whole hierarchy of the event series as shown below.

- 1986/2/4: Australia New South Wales Barrington Tops National Park. 4.2.1986
  - 1986/2/4: Australia New South Wales Barrington Tops National Park, Gloucester Tops, Negrohead Beech Forest Walking Trail. Altid.: ca. 1200 m; Koord.: 32°05' S, 151°35' E.
    - 4.2.1986 Australia New South Wales Barrington Tops National Park, Gloucester Tops, Negrohead Beech Forest Walking Trail. Altid.: ca. 1200 m; Koord.: 32°05' S, 151°35' I
      - GR04243
    - 1986/2/4 Australia New South Wales Barrington Tops National Park, Gloucester Tops, Negrohead Beech Forest Walking Trail. Altid.: ca. 1200 m; Koord.: 32°05' S, 151°35'
      - GR04228
  - 1986/2/4: Australia New South Wales Barrington Tops National Park, Gloucester Tops, Negrohead Beech Forest Walking Trail, on way to Gloucester Falls. Altid.: ca. 1200 m; K
    - 4.2.1986 Australia New South Wales Barrington Tops National Park, Gloucester Tops, Negrohead Beech Forest Walking Trail, on way to Gloucester Falls. Altid.: ca. 1200 m
      - GR04260
    - 4.2.1986 Australia New South Wales Barrington Tops National Park, Gloucester Tops, Negrohead Beech Forest Walking Trail, on way to Gloucester Falls. Altid.: ca. 1200 m
      - GR04264
      - GR04265

To edit the data of an event series, select it in the tree to display the fields with the details as shown below.

Event series

Date

04.02.1986

Description

Australia New South Wales Barrington Tops National Park.

Code

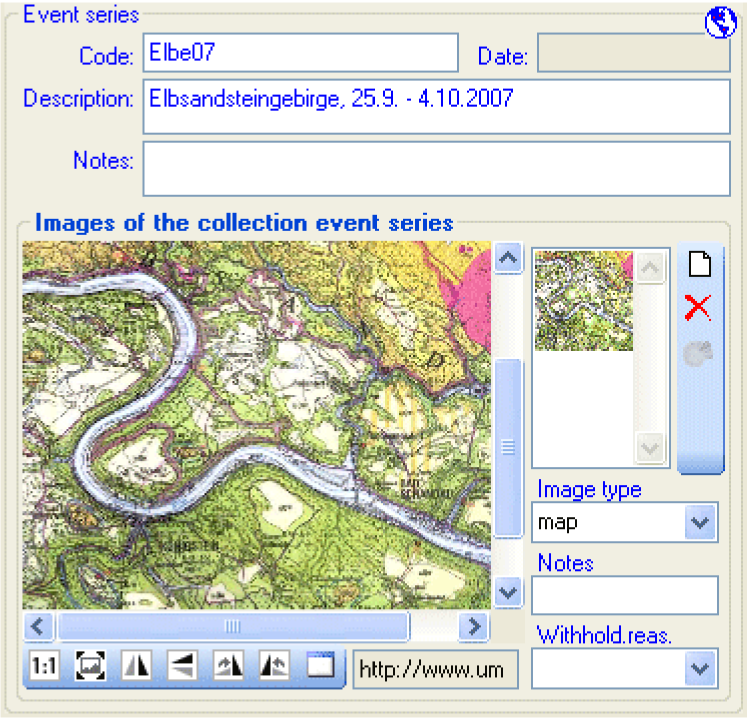
Notes

To insert a new collection event series click on the button. If there are no collection event series so far, the collection event will be placed within the new collection event series. If there are collection event series present, the new collection event series will be placed below the selected collection event series. To assign an collection event to an existing collection event series already available in the database click on the icon.

To move an item within the hierarchy, just drag it with the mouse to whatever position it should be placed. Keep in mind, that specimens can only be placed in collection events and collection events only in collection event series.

If you want to delete a collection event series or an collection event, remove all depending collection event series, events and specimens and click on the ✕ button. A specimen can not be deleted here. If you want to remove a collection event from a collection event series, click on the 🌐 button to open the window for selecting a collection event series. Then select nothing but simply click OK to remove the link to the collection event series.

The images for a collection event series are shown below the data of the collection event series as shown below.To add images to a collection event series, click on the 🗋 button, to remove an image use the ✕ button.



Event series

Code: Elbe07

Date:

Description: Elbsandsteingebirge, 25.9. - 4.10.2007

Notes:

Images of the collection event series

Image type: map

Notes:

Withhold.reas.:

http://www.um

To zoom a sector of the image, just drag the mouse over the image. A red square will indicate the zoomed area. To set the size of the image to the original resolution click on the 1:1 button. To adapt the size of the image to the available space in the form click on the ⛶ button. To change the orientation of the image use the appropriate buttons (flip horizontal, flip vertical, rotate right, rotate left). To view the image in a separate form, click on the ☐ button. If the image should not be published e.g. on the internet, enter any reason in the **Withhold. reason** - field.

If you want to change to another specimen listed in the collection event series select it in the hierarchy and click on the button.

The current specimen together with the event and all superior collection event series will be highlighted.

The data about the collection event series are stored in the table CollectionEventSeries.

Event images

The specimens stored in a collection are gathered during a collection event. To insert an image related to a collection event click on the 🗋 button. If you want to delete an image, click on the ✕ button.

If for any reason, an image should not be published i.e. shown on a website, enter the reason in the field **Withholding reason**. Only images where this field is empty will be shown e.g. on websites.

http://bsm4.snsb.info/UBT-Mycology/Biota/pics/aufn

To zoom a sector of the image, just drag the mouse over the image. A red square will indicate the zoomed area. To set the size of the image to the original resolution click on the 1:1 button. To adapt the size of the image to the available space in the form click on the ⛶ button. To change the orientation of the image use the appropriate buttons (◭ flip horizontal, ⧩ flip vertical, ↻ rotate right, ↺ rotate left). To view the image in a separate form, click on the ☐ button. If the image should not be published e.g. on the internet, enter any reason in the **Withhold. reason** - field.

Data are stored in the table CollectionEventImage.

Geography

As additional information to the description of the locality you can use several localisation systems, e.g. georefencing. These entries are marked with an N icon in the tree as shown below.

1986/2/4: Australia New South Wales Barrington Tops National Park. 4.2.1986

1986/2/4: Australia New South Wales Barrington Tops National Park, Gloucester Tops, Negrohead Beech Forest Walking Trail. Alt

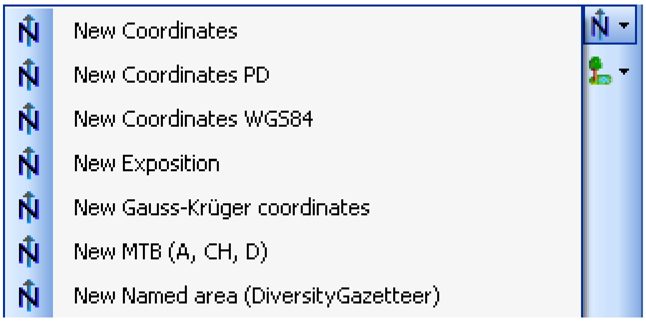
1986/2/4 Australia New South Wales Barrington Tops National Park, Gloucester Tops, Negrohead Beech Forest Walking Trail.

Altitude (mNN): c. 1200 m

Greenwich Coordinates Long. (E/W): 151°35' E Lat. (N/S): 32°05' S

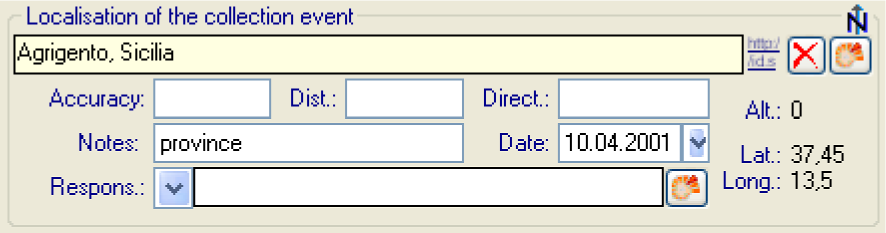
GR04228

To add a new entry choose the localisation system from the drop down list as shown below. Only items that are not already set for a collection event will be shown. The items that are visible in the dropdown list can be customized.



If a localisation should be removed, select it from the list and click on the ✕ button.

To edit the details of an entry, select in the list to open the fields in the form on the right. The localisation system DiversityGazetteer is linked to the module DiversityGazetteer within the Diversity Workbench, providing information on geographical names as shown below.



Localisation of the collection event

Agrigento, Sicilia

Accuracy:

Dist.:

Direct.:

Alt.: 0

Notes: province

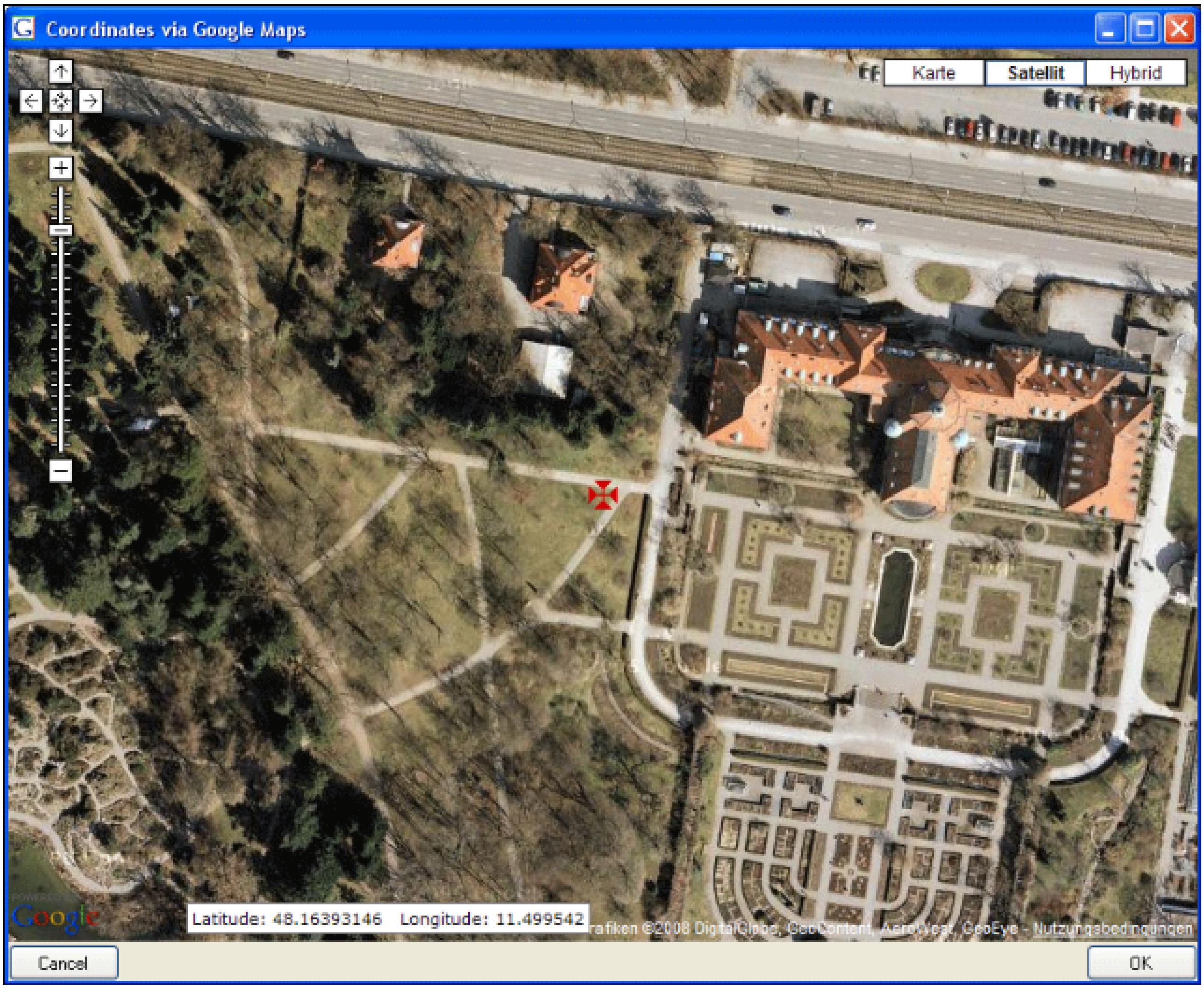
Date: 10.04.2001

Lat.: 37,45

Long.: 13,5

Respons.:

If you use geo-coordinates as georeferencing system (coordinates WGS84), a button ✠ will appear, that will provide you with the possibility to set or correct the coordinates via Google Maps. Just click on the ✠ button, and a window will open where you will see a map provided by Google Maps as shown below. If there are allready coordinates provided by a different localisation e.g. by the DiversityGazetteer, these will be taken as a starting position. So you may use an entry for a named area (DiversityGazetteer) as a approximate localisation and than additional coordinates as the more accurate localisation.



Latitude: 48.16393146 Longitude: 11.499542

If you start with existing geographic coordinates (WGS 84) in your data, the system will use these as starting point. You can zoom the map, drag it to another position and change from map to satellite mode. The actual position is symbolized by the ✠ symbol in the middle of the map. The current coordinates are shown in the field at the buttom of the map. To take these coordinates in your data, just click OK.

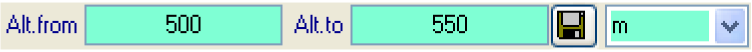
Please keep in mind, that Google Maps coordinates are based on **WGS84**.

The values for any localisation system are stored in two text fields. You can enter your values as simple text. This may prevent any calculations with your values. So you should prefer to enter your values according to the measurement units available. Whatever antique measurement units like feet or Fahrenheit may exist, within the Diversity Workbench measurement data are stored in units according to the *Système international d'unités* (SI). For those who still need to use these units DiversityCollection provides a possibility to convert them into their modern counterparts. To enter a numeric value choose the unit you prefer from the list. The form will change as shown below.

Long. (EW) 18 36 1,6111111 Lat. (NS) -31 16 34,888888 deg_min_sec

You can then edit the values and click on the 💾 button to take the changed values in your data. The system will calculate the corresponding value for storage in the database together with the default accuracy. Correct this accuracy if you have more exact values. To indicate that the shown values are calculated from the values in the database the fields have a green background. When you save the data, DiversityCollection will store geographic coordinates and the average altitude where available in separate fields.

The altitude, the exposition or the slope may be entered as one value or as a range of two values. If you use the conversion function and have only one value, make sure, that the second field is empty.


Alt.from 500 Alt.to 550 m

Available units: meter and feet.


Exp. from NNE to NE orientation

Available units: Orientiation (N, NE, ...) and degree rel. to North.


Slope from 10 to 15 percent

Available units: degree and percent.

The accuracy resp. uncertainity will be calculated as an approximation in parts derived from Wieczorek, J. 2001 (MaNIS/HerpNet/ORNIS Georeferencing Guidelines. University of California, Berkeley: Museum of Vertebrate Zoology) and in parts according to Wieczorek, J., Q. Guo, and R. Hijmans 2004 (The point-radius method for georeferencing locality descriptions and calculating associated uncertainty. International Journal of Geographical Information Science 18: 745-767). The unit of the accuracy will always be the unit stored in the database according to the *Système international d'unités* (SI) resp. degrees for angles.

The data for the geography are stored in the table CollectionEventLocalisation.

Maps of the collection event

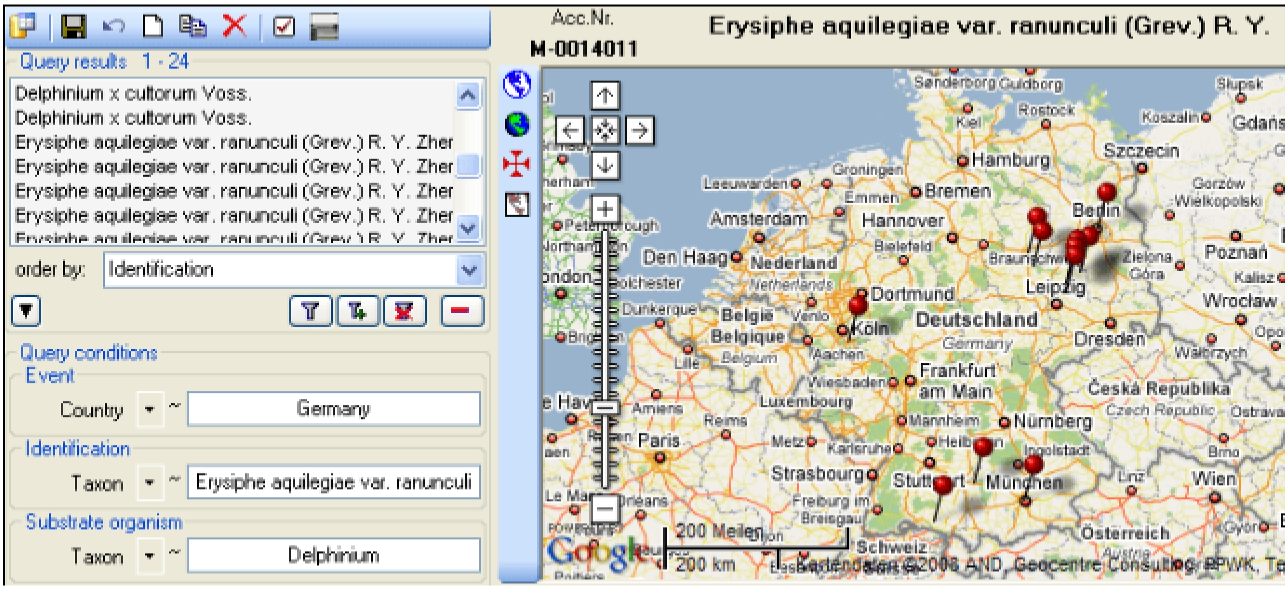
If there are coordinates available for your collection site of your locality using

To use this service, you need access to the internet. Click on the button in the control to show the maps. Click on the button to see the location of your event or if the event is part of a series the button to see all locations of the event series. The site can be displayed either as a satellite image

or a geographical map. If you click on one of the needles marking the locations of the events, a window will show you the description of the event.

To generate a map you need coordinates stored in the table CollectionEventLocalisation.

To show a distribution map as shown below of all the specimens found in your query, use the button. This functionality is limited in the number of specimens that can be depicted, so it may be neccessary to restrict your query.



Query results 1 - 24

Delphinium x cultorum Voss.
Delphinium x cultorum Voss.
Erysiphe aquilegiae var. ranunculi (Grev.) R. Y. Zher
Erysiphe aquilegiae var. ranunculi (Grev.) R. Y. Zher
Erysiphe aquilegiae var. ranunculi (Grev.) R. Y. Zher
Erysiphe aquilegiae var. ranunculi (Grev.) R. Y. Zher
Erysiphe aquilegiae var. ranunculi (Grev.) R. Y. Zher

order by: Identification

Query conditions

Event

Country ~ Germany

Identification

Taxon ~ Erysiphe aquilegiae var. ranunculi

Substrate organism

Taxon ~ Delphinium

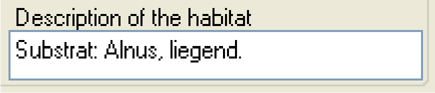
Acc.Nr.

M-0014011

Erysiphe aquilegiae var. ranunculi (Grev.) R. Y.

Habitats and properties of the collection site

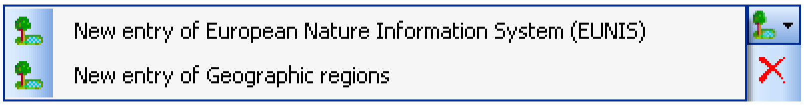
For the description of the habitat select the collection event 🌍 or an existing collection site property 🌳. The description is entered in the field **Description of the habitat** (see below).



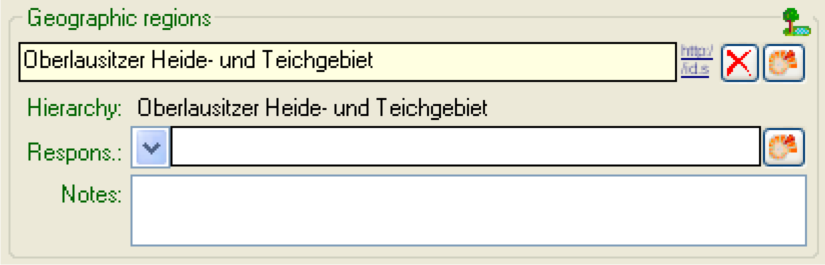
Description of the habitat

Substrat: Alnus, liegend.

To enter a new property of the collection site, select the collection event 🌍 or an existing collection site property 🌳 and then choose the type of the property you want to enter from the dropdown menu as shown below. Only items that are not already set for a collection event will appear in the list. You can customize the selection of visible items.



The list is dependent on the availability of terminologies for site descriptions. Details for the property can be entered if you choose the item in the hierarchy. The person responsible for the entry as well as notes can be entered in the corresponding fields as shown below.



Geographic regions

Oberlausitzer Heide- und Teichgebiet

Hierarchy: Oberlausitzer Heide- und Teichgebiet

Respons.:

Notes:

To delete entries use the ✕ button. You can enter a value by either typing the name of the collection site property or by selection from the module DiversityScientificTerms. To search for properties from this module click on the 🔍 button. As responsible user the name of the current user will be inserted. You may change this by either typing or selection from the module DiversityAgents.

The data concerning the habitats are stored in the table CollectionEventProperty.

Specimens

Specimens are the entities stored in a collection. For handling the data use the appropriate buttons (new specimen, copy, delete). See the data section for further details. Directly attached to the specimen are the data about accession, label, exsiccatae, notes, reference and the availability. A specimen may be composed of several units. Any problems concerning the specimen should be entered into the problems field.

The header of the main window shows some important parameters for the specimen selected. On the left side the **accession number** is shown. In the center you find the last identification of the main identification unit according to the display order. The next field shows the internal **ID**'s (field CollectionSpecimenID in table CollectionSpecimen and CollectionEventID in table CollectionEvent) and the **Version**s for the specimen and the collection event. For details about the version of a dataset see the version topic. The availability of a specimen can be changed by entering an appropriate reason in the field **Withholding reason**.

Acc.No. M-0040397

Erysiphe aquilegiae var. ranunculi (Grev.) U. Braun

ID (Specimen / Event) 135548 / 211558

Version 3 / 1

Withhold. reason

If the specimen is a type, the header will show the type state and the identification connected with the type (see below).

Acc.No. M-0003940

Potamogeton parmatus Hagström
isotype

ID (Specimen / Event) 29432 / 72391

Version 1 / 2

Withhold. reason

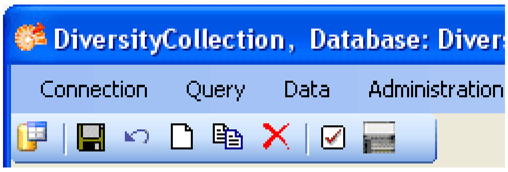
To inspect the history of a specimen click on the button. For further details see the history section.

With the buttons you can control the upper part of the window with the maps, the images for the collection event and the specimen as well as the label print. The buttons with the corresponding sector visible in the window are depicted with a red background. If there are images available and they are hidden, the background will turn to yellow.

The data are stored in the table CollectionSpecimen.

Data

The controls for the handling of datasets in the database are located in the left upper part of the window as shown in the image below. A step-by-step introduction for the creation of new datasets is provided in the tutorial.

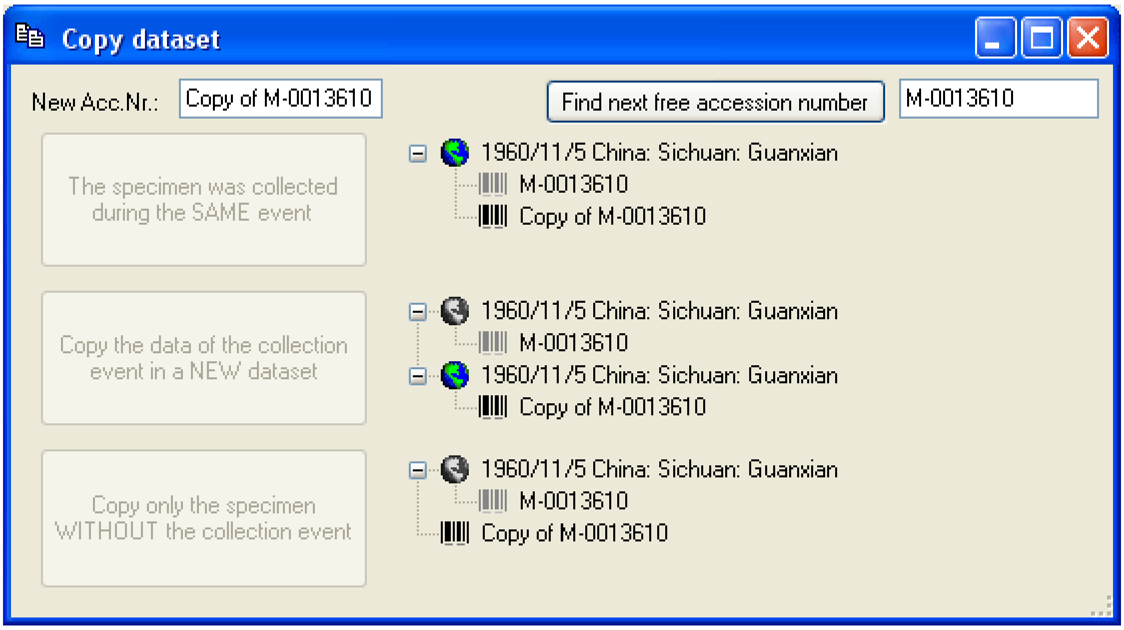


To **save** the changes in a dataset click on the 💾button. If you select another dataset from the result list, the current changes will be saved automatically.

To **undo** the changes in a dataset click on the ↶ button. This will recover the original data unless the changes had been saved or changes were done in certain tables or hierarchies were the data must be stored to display the hierarchy.

To create a **new** entry in the database, click on the 🗋 button below the search result listbox. This will create a new record of a specimen and show it in the result list.

To **copy** the data of a specimen record, choose it from the list and click on the button ⎘. If the specimen you want to copy is linked to a collection event, a window will open and provide you with several possibilities for the copy as shown below.



New Acc.Nr.: Copy of M-0013610

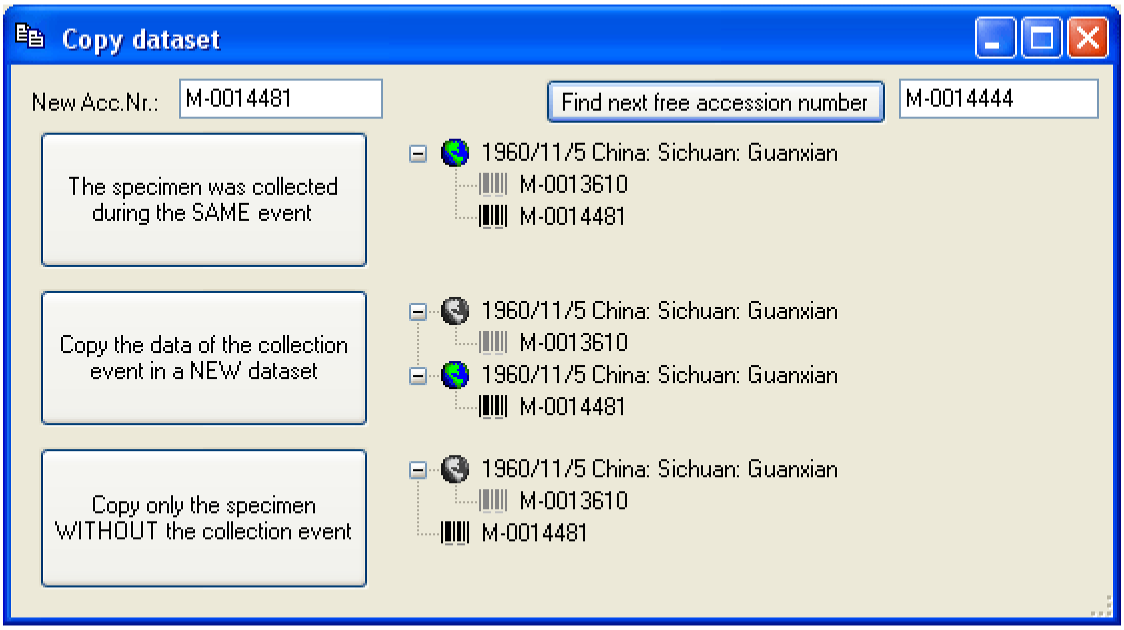
M-0013610

The field for the new accession number contains a string like Copy of ... . If you change this the accession number to a value that is already present in the database you will be warned as shown below.

New Acc.Nr.: M-0014446

M-0014006

Use the **[Find next free accession number for:]** button to search for the next free number for the accession number shown in the second field. If the program finds a free number, it will be used as shown below.



New Acc.Nr.: M-0014481

M-0014444

1960/11/5 China: Sichuan: Guanxian
M-0013610
M-0014481

1960/11/5 China: Sichuan: Guanxian
M-0013610
1960/11/5 China: Sichuan: Guanxian
M-0014481

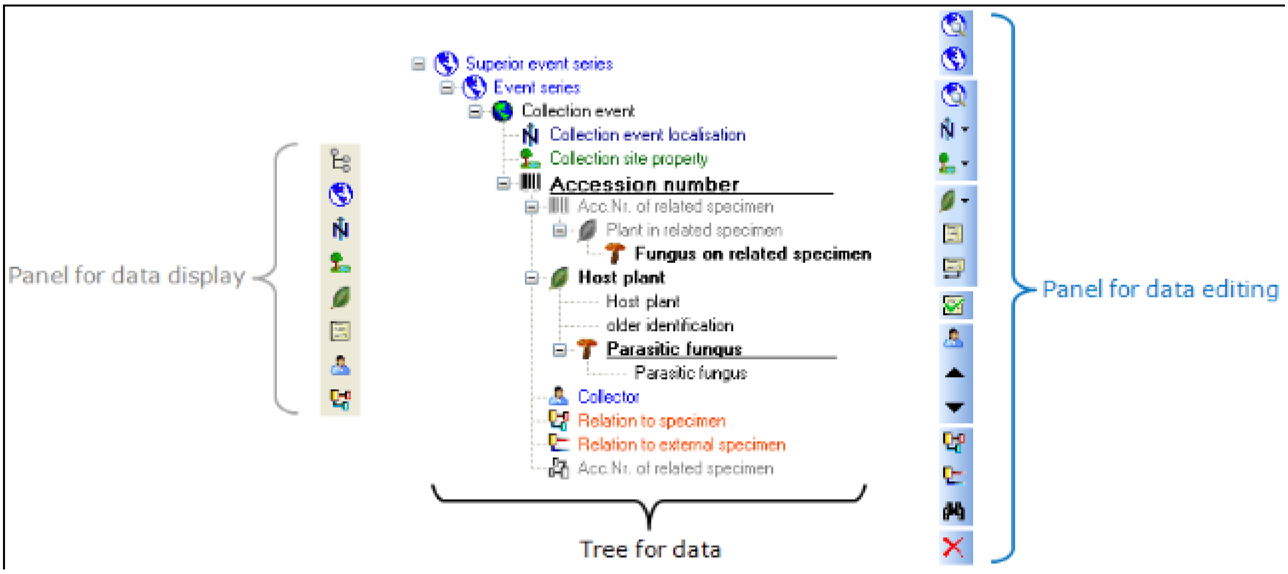
1960/11/5 China: Sichuan: Guanxian
M-0013610
M-0014481

The first option will take the new dataset in the same collection event as the original data, so no new data for a collection event will be generated. The second option will create a copy of the original data for the collection event and connect the copy of the specimen record with the new event. The last option will only copy the specimen data and establish no connection to any collection event. If you decide not to copy anything, just close the window.

To **delete** a dataset click on the button ✗.

Tree for the specimen

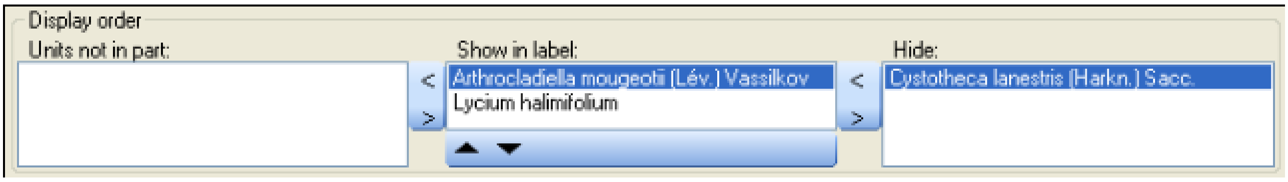
The upper tree in the window provides an overview for all the data linked with the specimen. With the buttons in the left panel you can hide or show certain nodes in the tree. So if for example you do not want to see the collectors, just click on the button and they will be hidden in the tree. The button will change to a grey version and the background will turn to yellow to show that there are hidden data of the collectors. The first two buttons (,) are visible if the collection event is part of a collection event series. They switch between two display modes for the event series. If you click on the button only the superior event series will be shown. To show the whole hierarchy of the event series, click on the button.



The panel on the right side of the tree is for editing the data, like for example the button will insert a new collector. For further details see the special sections.

Display order

The display order defines the sequence in which the units within this specimen will appear on e.g. a label. The first unit will be printed in the header of the label, others are included in the text below. You can change the display order by using the ▲ ▼ buttons. If a unit should not appear on the label, transfer it to the hide list using the > button. The < button returns it to the list that will be shown on a label. The first unit can not be transferred to the hide list.



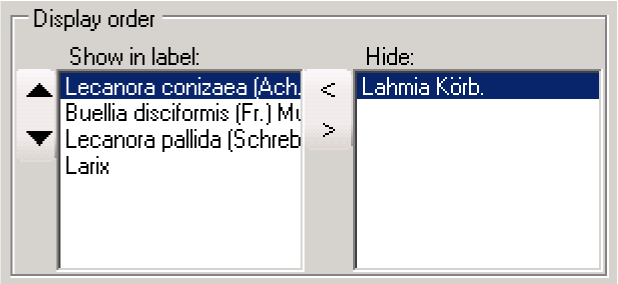
Show in label:
Arthrocladiella mougeotii (Lév.) Vassilkov
Lycium halimifolium

Hide:
Cystotheca lanestris (Harkn.) Sacc.

In addition to the display order you can specify whether an organsim is present in a selected part of a specimen.

Units not in part:
Lycium halimifolium
Cystotheca lanestris (Harkn.) Sacc.

Show in label:
Arthrocladiella mougeotii (Lév.) Vassilkov

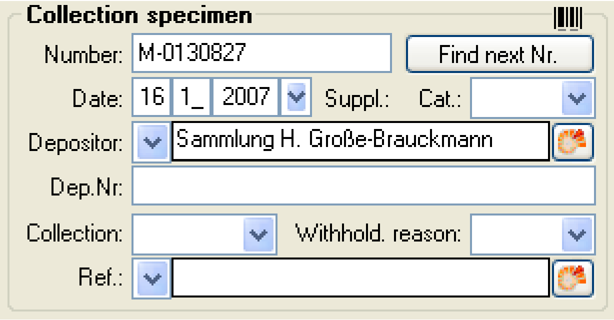


Show in label:
Lecanora conizaea (Ach.
Buellia disciformis (Fr.) Mu
Lecanora pallida (Schreb
Larix

Hide:
Lahmia Körb.

Accession

The accession of a specimen in a collection is documented with its accession number and if available the date of the accession.


Collection specimen

Number: M-0130827

Date: 16 1_ 2007

Suppl.:

Cat.:

Depositor: Sammlung H. Große-Brauckmann

Dep.Nr:

Collection:

Withhold. reason:

Ref.:

If the specimen was received from another collection, this may be documented with the name of the depositor and the number in the original collection (Dep.Nr).

If a new specimen is entered you can use the Find next button to search for the next free accession number. A window will open as shown below, where you can start the search. The search will start with the number you give as a starting point.


Accession number

Searching for the next free accession number after a given start

Start search for the next accession number after: M-0130827

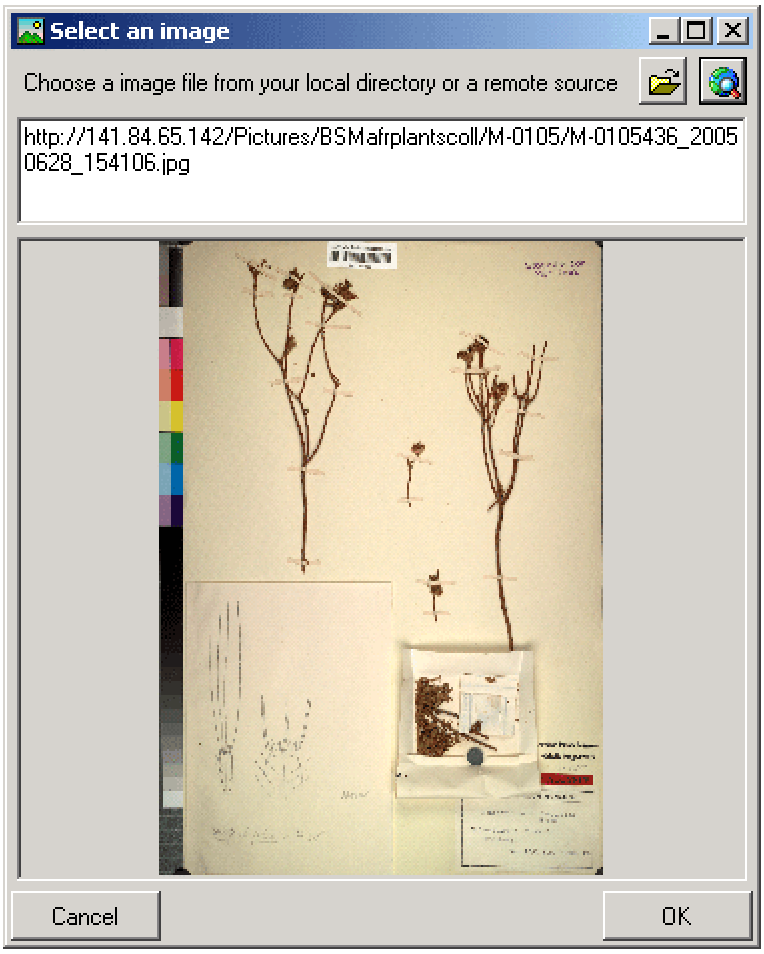
Next free accession number: M-013828

The system will try to find the next free number on the basis of the accession numbers available in the database. Click OK to use the number for the specimen.

Data concerning the accession and deposition are stored in the table CollectionSpecimen.

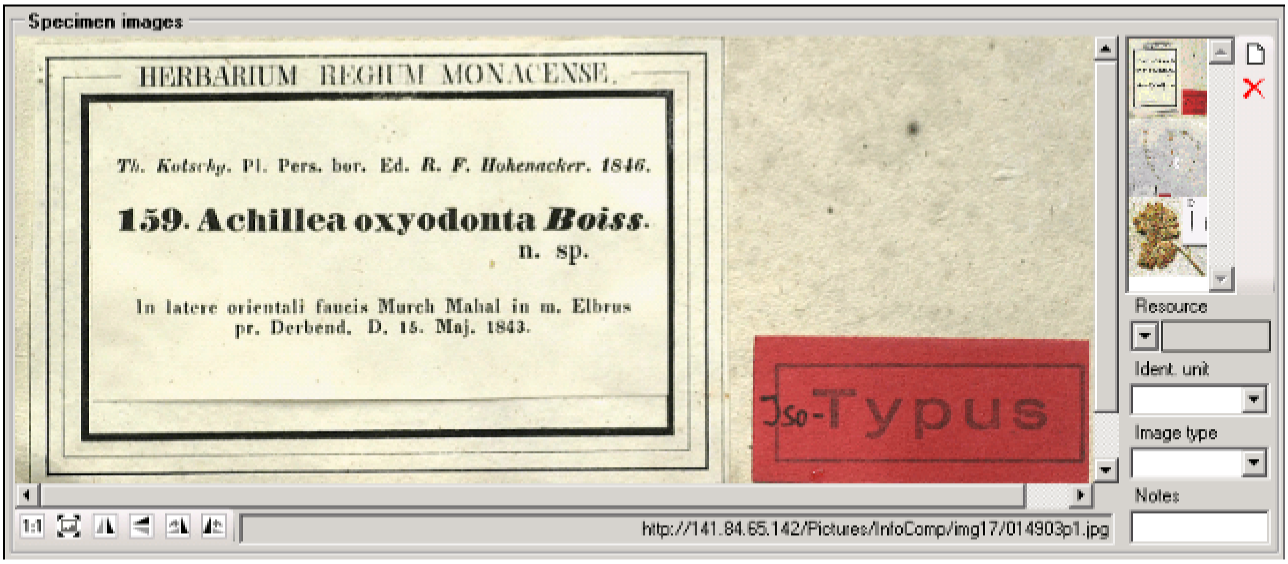
Specimen images

To see the specimen images activate the icon in the image selector. If you choose the option **View - Show existing images** from the menu, the images will automatically be shown. Each specimen may be documented with several images. The images may be stored local with its path or as a reference to the module DiversityResources within the Diversity Workbench. To enter a new image, click on the button. A window will open where you can enter the path and file name of the image. Click on the button to search in your local directories or on the button to search for a web address. The selected image will be shown in the preview.



http://141.84.65.142/Pictures/BSMafrplantscoll/M-0105/M-0105436_20050628_154106.jpg

To delete an image, select it from the list and click on the button.



http://141.84.65.142/Pictures/InfoComp/img17/014903p1.jpg

To zoom a sector of the image, just drag the mouse over the image. A red square will indicate the zoomed area. To set the size of the image to the original resolution click on the 1:1 button. To adapt the size of the image to the available space in the form click on the button. To change the orientation of the image use the appropriate buttons (flip horizontal, flip vertical, rotate right, rotate left). To view the image in a separate form, click on the button. If the image should not be published e.g. on the internet, enter any reason in the **Withhold. reason** - field.

Data are stored in the table CollectionSpecimenImage.

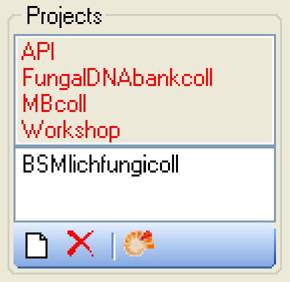
Projects

Every collection specimen can be assigned to any number of projects. To assign a specimen to a project click on the button. To remove it from a project, select the project from the list and click on the button.

Projects

BSMeryscoll
BSMschiefcoll

If there are projects, to which you have no access to, these will be listed in a separate list at the top as shown below.



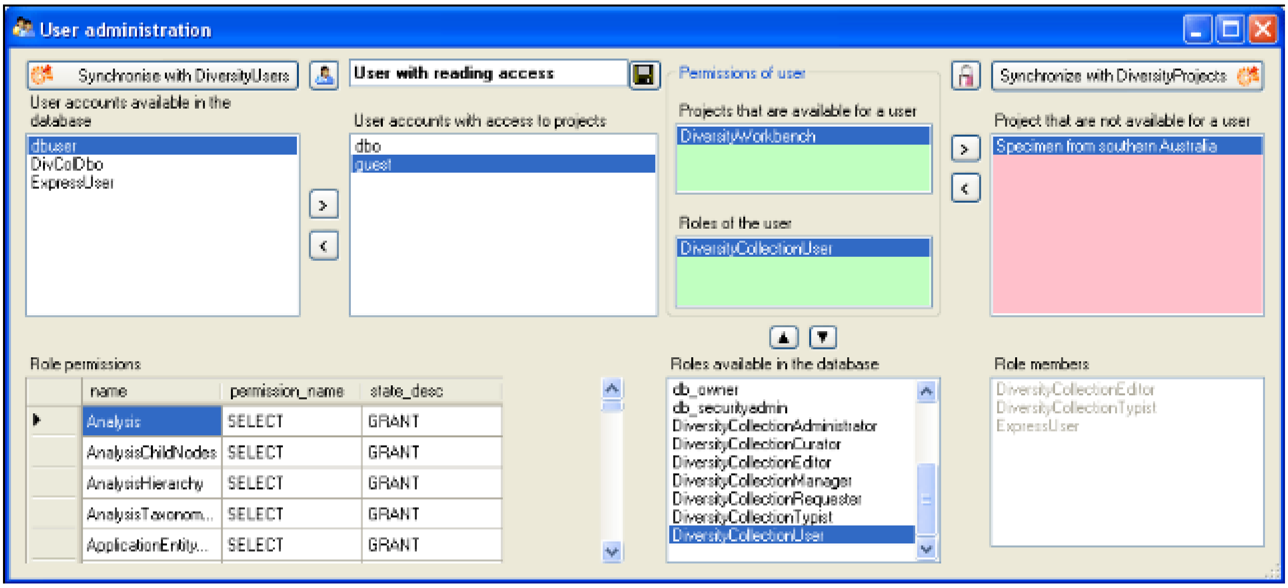
Projects

API
FungalDNAbankcoll
MBcoll
Workshop

BSMlichfungicoll

Data are stored in the table CollectionProject.

Details upon the projects within the Diversity Workbench are stored in the database DiversityProjects. To open a project to see further information upon a project click on the button. To edit details in the projects you need the application **DiversityProjects.exe** in your application directory and access to the database DiversityProjects. To synchronize the projects listed in DiversityProjects you can use the synchronize functionality in the user administration window as shown below. If DiversityProjects is not available you can create a new project with the button. If DiversityProjects is available, use the synchronize functionality Synchronize with DiversityProjects.



User accounts available in the database

dbuser
DivColDbo
ExpressUser

User accounts with access to projects

dbo
guest

Projects that are available for a user

DiversityWorkbench

Roles of the user

DiversityCollectionUser

Project that are not available for a user

Specimen from southern Australia

Role permissions

	name	permission_name	state_desc
▶	Analysis	SELECT	GRANT
	AnalysisChildNodes	SELECT	GRANT
	AnalysisHierarchy	SELECT	GRANT
	AnalysisTaxonom...	SELECT	GRANT
	ApplicationEntity...	SELECT	GRANT

Roles available in the database

db_owner
db_securityadmin
DiversityCollectionAdministrator
DiversityCollectionCurator
DiversityCollectionEditor
DiversityCollectionManager
DiversityCollectionRequester
DiversityCollectionTypist
DiversityCollectionUser

Role members

DiversityCollectionEditor
DiversityCollectionTypist
ExpressUser

Notes and problems

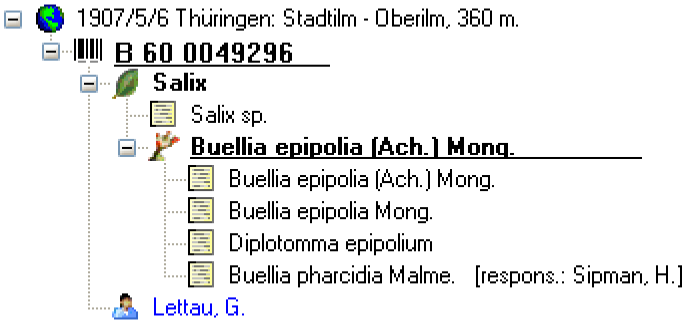
To enter notes or problems connected with the specimen select it in the hierarchy. The data form will then open the corresponding fields. The **Original** notes are the notes found on the label of the specimen, made by the original collector or from a later revision. **Additional** notes are those made by the editor of the specimen record, e. g. doubtful identification or locality.

In the **Problems** area enter the description of a problem that occurred during data editing. Typically these entries should be deleted after help has been obtained. Do not enter scientific problems here. Use Additional notes for such permanent problems!

The data are stored in the table CollectionSpecimen.

Organisms and identifications

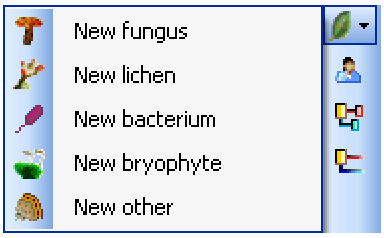
Each specimen can contain several organisms and each organism may have been identified several times as shown in the image below.



1907/5/6 Thüringen: Stadtilm - Oberilm, 360 m.
B 60 0049296
Salix
Salix sp.
Buellia epipolia (Ach.) Mong.
Buellia epipolia (Ach.) Mong.
Buellia epipolia Mong.
Diplotomma epipolium
Buellia pharcidia Malme. [respons.: Sipman, H.]
Lettau, G.

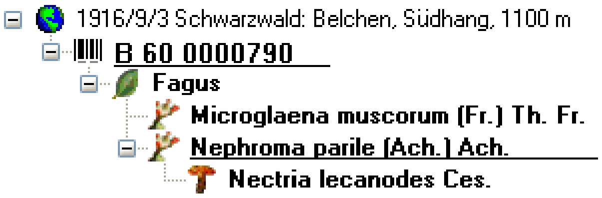
Identification unit

The items or organisms in one collection specimen are regarded as identification units. One specimen can contain several identification units, e.g. an insect (1) feeding on a fungus (2) growing as a parasit on a plant (3). To add a new organism use the drop down menu as shown below to select the taxonomic group to which the new organism belongs to.



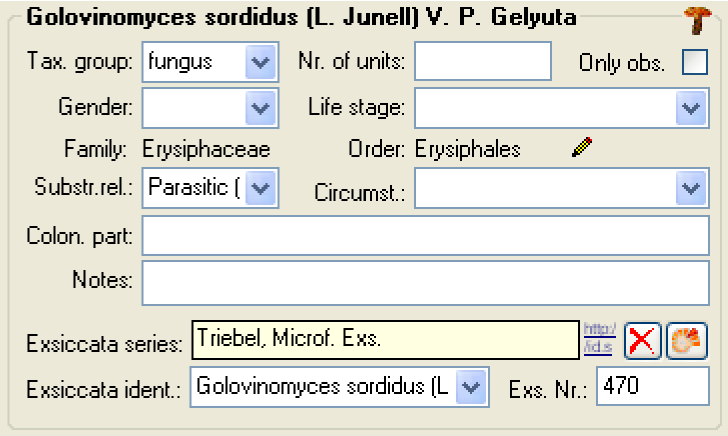
To specify the taxonmic groups that are shown in the drop down menu select Administration - Customize display ... from the menu.

The organisms of the specimen are shown in the tree. To edit the relations between the organisms just do this by drag and drop. The name of the organism under which the specimen is stored in the collection is underlined. To delete an organism select it in the tree and click on the ✗button.



1916/9/3 Schwarzwald: Belchen, Südhang, 1100 m
- **B 60 0000790**
  - **Fagus**
    - **Microglaena muscorum (Fr.) Th. Fr.**
    - **Nephroma parile (Ach.) Ach.**
      - **Nectria lecanodes Ces.**

To enter details about one of the organisms like the e.g. the gender or the life stage, select it in the tree. Then the fields for the details of this organism are shown in the right area of the window as shown below.



Golovinomyces sordidus (L. Junell) V. P. Gelyuta

Tax. group: fungus
Nr. of units:
Only obs. ☐
Gender:
Life stage:
Family: Erysiphaceae
Order: Erysiphales
Substr.rel.: Parasitic (
Circumst.:
Colon. part:
Notes:
Exsiccata series: Triebel, Microf. Exs.
Exsiccata ident.: Golovinomyces sordidus (L
Exs. Nr.: 470

Taxonomic hierarchy - family and order

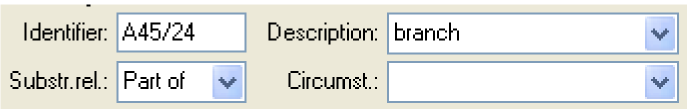
The entries for the family and the order of the taxon are either set when linking to a taxonomic database or manually when no link to a taxonomic database exists.

Family: Erysiphaceae
Order: Erysiphales

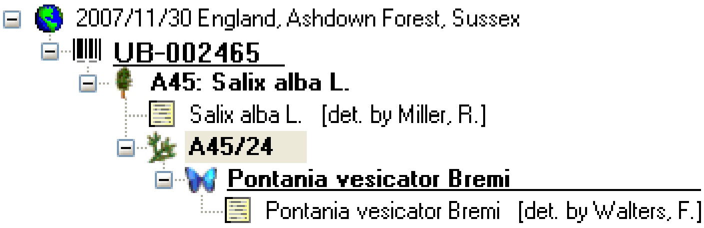
If no link to a taxonomic database exists you may enter the family and the order after clicking on the ✎button. To transfer these entries to other specimens with the same genus use the maintenance functions as described under Maintenance - family and order.

Parts of units

If a unit contains parts that have to be documented, you can do this by setting the relation to the substrate to "Part of".


Identifier: A45/24
Description: branch
Substr.rel.: Part of
Circumst.:

In the tree the backgroud of a part will be grey as shown below for the unit-tree und the tree depicting the storage of a sample. The name of the part will correspond to the identifier set for this part and the icon will correspond to the description of the part provided you choose one of the preset options contained in the drop down list. You may of course enter any description for the unit. A unit that is part of another unit can not get an identification. Identifications are restricted to the main unit.


2007/11/30 England, Ashdown Forest, Sussex
UB-002465
A45: Salix alba L.
Salix alba L. [det. by Miller, R.]
A45/24
Pontania vesicator Bremi
Pontania vesicator Bremi [det. by Walters, F.]

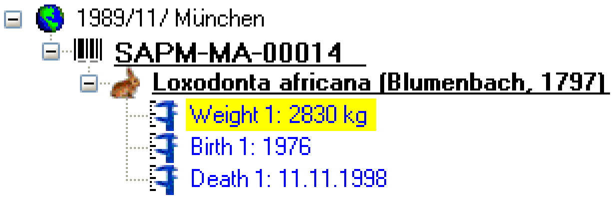

UB-002465
Pontania vesicator Bremi
Pontania vesicator Bremi
A45/24

For details about exsiccatal series and analysis see the related topics. You can sort your identification units e.g. for display on a label with the display order. Each identification unit can have several identifications.

The data for the organisms are stored in the table IdentificationUnit.

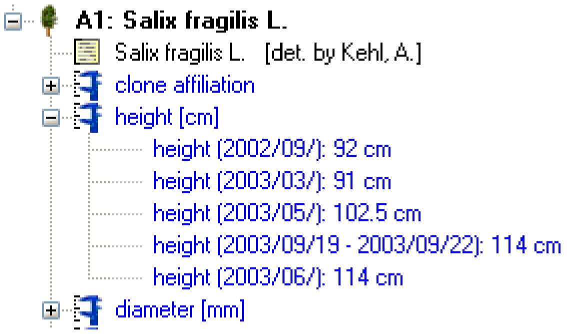
Analysis

The organisms in a specimen can be analysed by analysis types defined in the database. In the tree the analysis entries are symbolized with an icon as shown below. Only the types of analysis that were assigned to the group of the organism can be selected. An analysis always referes to an organism and may refer to a part of a specimen. An analysis that refers to a part of a specimen will be shown in the tree for the parts as shown in the examples below.



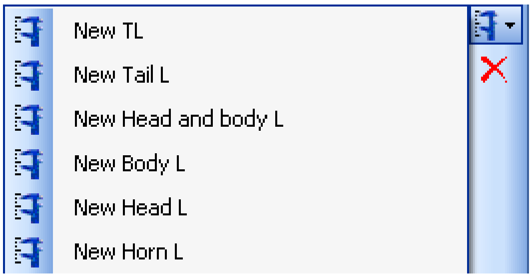
1989/11/ München
SAPM-MA-00014
Loxodonta africana (Blumenbach, 1797)
Weight 1: 2830 kg
Birth 1: 1976
Death 1: 11.11.1998

To show or hide the analysis items in the tree use the button in the left panel. This button has 3 states. In the default state the analyis entries will be shown as above. If you click a second time on the button it will change to the hierarchy mode and the entries will be shown as in the tree below. The last state will hide the entries.



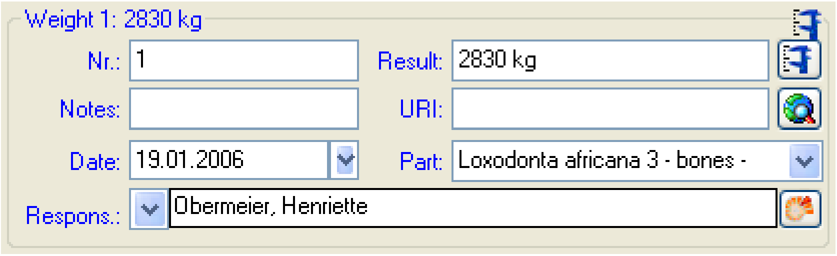
A1: Salix fragilis L.
Salix fragilis L. [det. by Kehl, A.]
clone affiliation
height [cm]
height (2002/09/): 92 cm
height (2003/03/): 91 cm
height (2003/05/): 102.5 cm
height (2003/09/19 - 2003/09/22): 114 cm
height (2003/06/): 114 cm
diameter [mm]

To insert a new analysis select the organism which has been analysed in the upper tree. Then select the type of the analysis from the drop down list as shown below.



New TL
New Tail L
New Head and body L
New Body L
New Head L
New Horn L

To delete an analysis, select it in the tree and use the ✕ button in the panel on the left. To edit the details of an analysis, select it in the tree to enter the fields as shown below. To enter or inspect an URI given for a single analysis, click on the button.

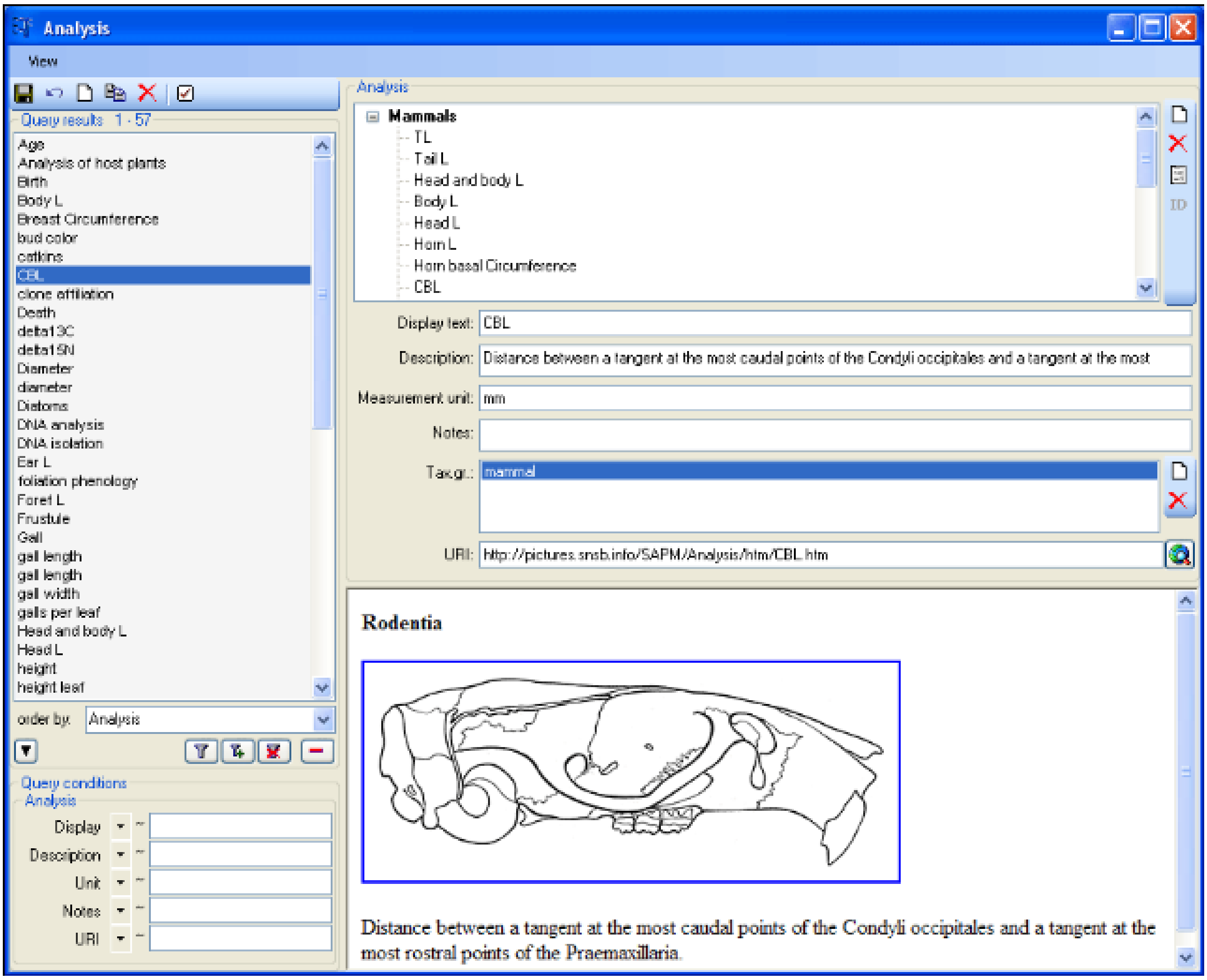


Weight 1: 2830 kg
Nr.: 1
Result: 2830 kg
Notes:
URI:
Date: 19.01.2006
Part: Loxodonta africana 3 - bones -
Respons.: Obermeier, Henriette

If an analysis refers to a part of the specimen, you can document this by choosing the respective part from the list (see field **Part** above). The analysis will then be shown in the tree for the parts of the specimen as well. Alternatively you may directly choose the organism in the part tree and create the analysis for this part of the organism in the part tree.

SAPM-MA-00014
Loxodonta africana 3
Loxodonta africana (Blumenbach, 1797)
Weight 1: 2830 kg

If you need further information about an analysis click on the button to open the window for the analysis administration. If you have the proper rights you can edit the analysis types used in your collection as shown below. This window is also accessible via the menu entry **Administration - Analysis...**



Age
Analysis of host plants
Birth
Body L
Breast Circumference
bud color
catkins
CBL
clone affiliation
Death
delta13C
delta15N
Diameter
diameter
Diatoms
DNA analysis
DNA isolation
Ear L
foliation phenology
Foret L
Frustule
Gall
gall length
gall length
gall width
galls per leaf
Head and body L
Head L
height
height leaf

order by: Analysis

Display
Description
Unit
Notes
URI

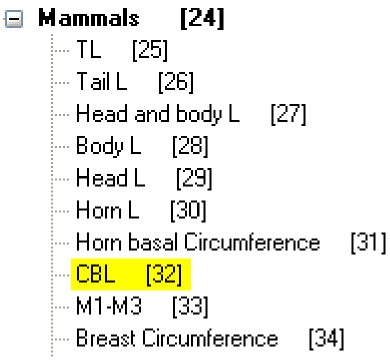
Mammals
- TL
- Tail L
- Head and body L
- Body L
- Head L
- Horn L
- Horn basal Circumference
- CBL

Display text: CBL
Description: Distance between a tangent at the most caudal points of the Condyli occipitales and a tangent at the most
Measurement unit: mm
Notes:
Tax.gr.: mammal
URI: http://pictures.snsb.info/SAPM/Analysis/htm/CBL.htm

Rodentia

Distance between a tangent at the most caudal points of the Condyli occipitales and a tangent at the most rostral points of the Praemaxillaria.

For the import and export of data it is sometimes necessary to know the ID's of the analyis types. To see the ID's, click on the **ID** button. Than the ID's will be shown as in the image below.

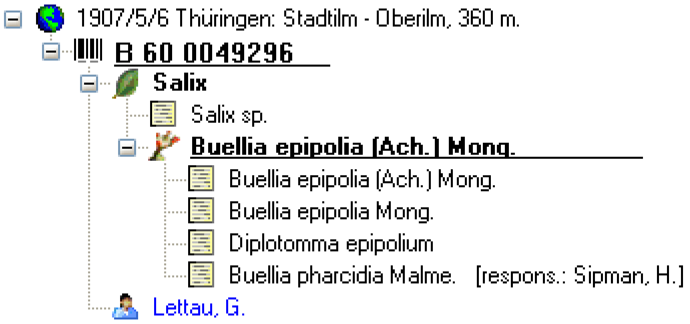


Mammals [24]
- TL [25]
- Tail L [26]
- Head and body L [27]
- Body L [28]
- Head L [29]
- Horn L [30]
- Horn basal Circumference [31]
- CBL [32]
- M1-M3 [33]
- Breast Circumference [34]

The types of an analysis are restricted by the taxonomic group of the organism or object to be analysed. Edit the list of taxonomic groups that can use a certain analysis using the 🗋 and ✕ button. For details about handling the data see the data section. If you want to or inspect an URI given for an analysis type, click on the 🌐 button. In the window below the URL related to the analysis can be shown.

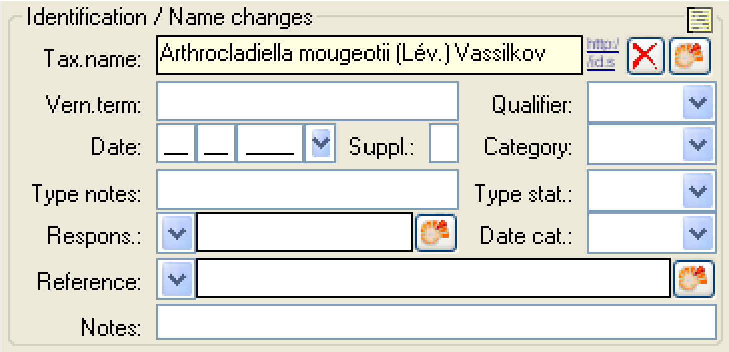
Identification

Each organism or unit may have been identified several times. The identifications are listed in the tree under the organism as shown in the image below. To create a new identification choose the organism from the tree and click on the ▤icon. The last identification will always be taken as the valid one and set at the top of the list. To insert an older identification at the base of the list click on the ▤icon.



1907/5/6 Thüringen: Stadtilm - Oberilm, 360 m.
B 60 0049296
Salix
Salix sp.
Buellia epipolia (Ach.) Mong.
Buellia epipolia (Ach.) Mong.
Buellia epipolia Mong.
Diplotomma epipolium
Buellia pharcidia Malme. [respons.: Sipman, H.]
Lettau, G.

To hide / show the identifications in the tree click on the ▤icon on the right panel next to the tree. To enter a confirmation of a identification, choose it in the tree and then click on the ☑ button. To delete an identification select it in the tree and click the ✗ button. To enter details for an identification, choose it in the tree. You then can enter the details in the form opening on the right side of the tree as shown below.



Identification / Name changes

Tax.name: Arthrocladiella mougeotii (Lév.) Vassilkov
Vern.term:
Qualifier:
Date:
Suppl.:
Category:
Type notes:
Type stat.:
Respons.:
Date cat.:
Reference:
Notes:

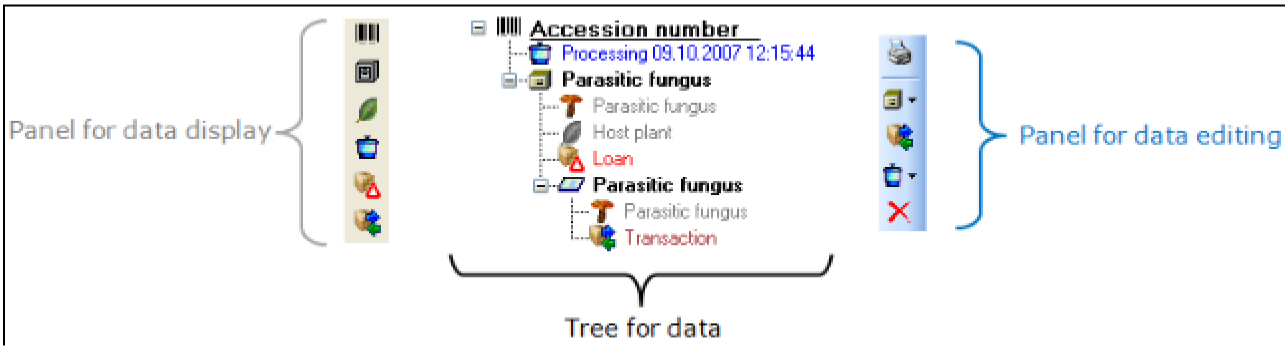
The taxonomic name of an organism can be selected from either the names already available in DiversityCollection or from the module DiversityTaxonNames. To choose from the local names type the beginning of the name and click on the drop down button ▼ to get a list of the available names. You can use wildcards according to SQL.

To select a name from an external database for taxonomic names, click on the button. A window will open where you can search for a taxonomic name.

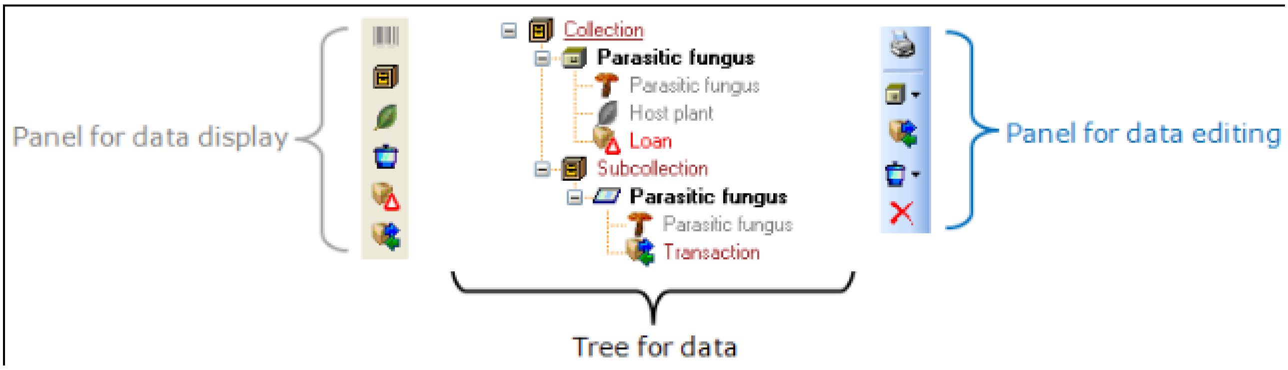
In the database the data for the identification are stored in table Identification.

Storage and trees for the parts of the specimen

In the tree at the base of the window the parts of the specimen with their related data are shown. This tree depicts the parts either in accordance to their relation to each other in the specimen tree (click on the icon in the panel on the left) ...



... or depending on the collections where the parts are stored (click on the icon in the panel on the left).

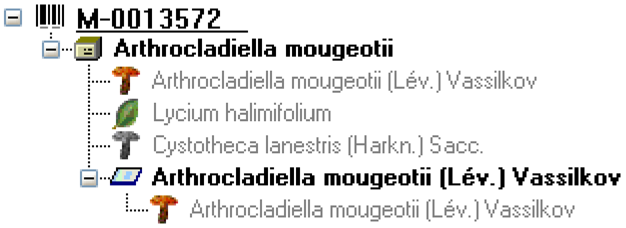


With the buttons in the left panel you can hide or show certain nodes in the tree. So if for example you do not want to see the processings, just click on the button and they will be hidden in the tree. The button will change to a grey version and the background will turn to yellow, to show you that there are hidden data of the processings.

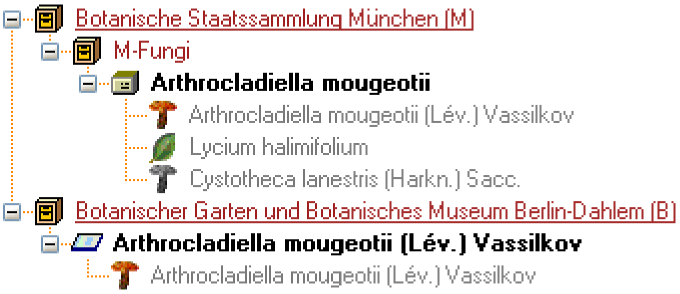
The panel on the right of the tree is for editing the data, like for example the button will insert a new transaction. For further details see the sections Transaction and Processing .

Parts of the specimen

A specimen can contain several parts which may be stored in several collections. These parts may represent different material categories, e.g. herbarium sheets, microscopic slides etc. The parts are shown in the part tree under the main tree. This tree depicts the parts either in accordance to their relation to each other in the specimen tree (click on the icon in the panel on the left) - see first image below - or in relation to the collections where the parts are stored (click on the icon in the panel on the left) - see second image below where the two parts of the specimen are located in two collections. To add a new part, use the drop down field in the panel on the right of the tree and choose the material category of the new part. The material categories that appear in this list can be customized. You can set the default collection for new parts. If the default collection is not set, you will be asked to name the collection of the new part. If the part is derived from another part, select this in the tree before creating the new part. The new part will then be a child of the old part. You can later edit these relations by drag & drop. If you want to create a copy of a part, use the button in the panel right of the tree.



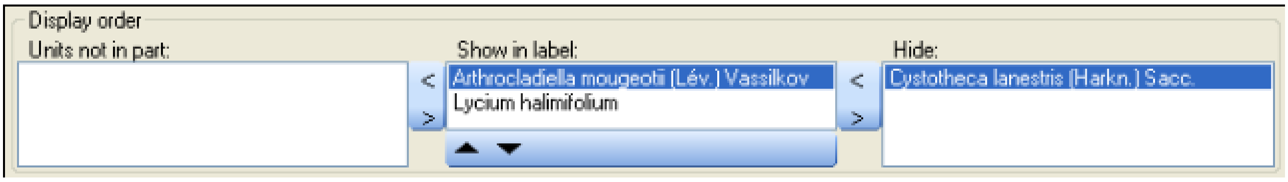
M-0013572
- **Arthrocladiella mougeotii**
  - Arthrocladiella mougeotii (Lév.) Vassilkov
  - Lycium halimifolium
  - Cystotheca lanestris (Harkn.) Sacc.
  - **Arthrocladiella mougeotii (Lév.) Vassilkov**
    - Arthrocladiella mougeotii (Lév.) Vassilkov



Botanische Staatssammlung München (M)
- M-Fungi
  - **Arthrocladiella mougeotii**
    - Arthrocladiella mougeotii (Lév.) Vassilkov
    - Lycium halimifolium
    - Cystotheca lanestris (Harkn.) Sacc.

Botanischer Garten und Botanisches Museum Berlin-Dahlem (B)
- **Arthrocladiella mougeotii (Lév.) Vassilkov**
  - Arthrocladiella mougeotii (Lév.) Vassilkov

If an organim is present in a part of the specimen, it will be shown in the tree. To edit the presence, select the specimen part in the tree and edit the **Display order** as shown below.



Display order

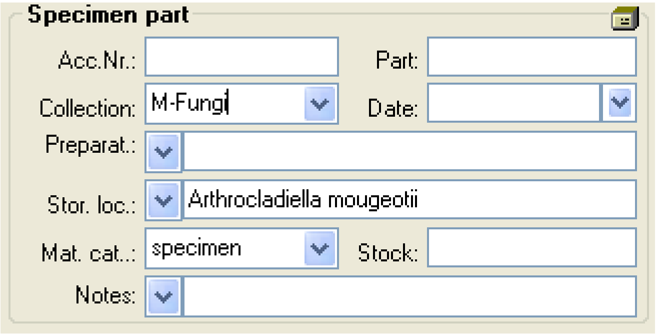
Units not in part:	Show in label:	Hide:
	Arthrocladiella mougeotii (Lév.) Vassilkov Lycium halimifolium	Cystotheca lanestris (Harkn.) Sacc.

In the expample above, all organisms are present in the specimen, but the fungus *Cystotheca lanestris* was chosen to not appear on the label and transferred to the **Hide** list. This is symbolized by a grey icon in the tree. The slide, symbolized by the icon, was created from the sample, so in the specimen tree it is shown as a child of the specimen symbolized by the icon. Concerning the organisms, only the fungus *Arthrocladiella* is found on the slide. So in the tree it is the only organ ism shown as child of the slide. In the display order the two other organisms appear in the **Units not in part** list (see below).

Display order

Units not in part:	Show in label:	Hide:
Lycium halimifolium Cystotheca lanestris (Harkn.) Sacc.	Arthrocladiella mougeotii (Lév.) Vassilkov	

To move the organisms between the lists use the **>** and **<** buttons. In the list **Show in label** you can change the sequence of the organisms with the ▲and ▼buttons in the panel at the base of the list. The organism at the top will be the one that will be taken as the main organism, e.g. for printing a label. To edit the details of a part, select it in the tree to open the fields as shown below.



Acc.Nr.:
Part:
Collection: M-Fungi
Date:
Preparat.:
Stor. loc.: Arthrocladiella mougeotii
Mat. cat.: specimen
Stock:
Notes:

The identifier, e.g. the taxonomic name under which the specimen can be found in the collection is entered in the field **Storage location**. You can search for this entry in the query.

To enter the **storage location** you can use the drop down button ▼ to select from the identifications within the specimen. The drop down button ▼ for the Notes will provide you with a list of all entries in this field, filtered with your entry in the text field. You may use wildcards like "%" or "_" (see wildcards).

In the collection tree, the specimen are to shown with their dependence upon each other, but where they are located with the collections. To get informations about a collection just select it in the tree. If you have the necessary rights, you can use the button to open for the administration of the collections. This form is as well accessible under the menu entry **Administration - Collections...**

The material category of a specimen part is indicated by the icon in the hierarchy.

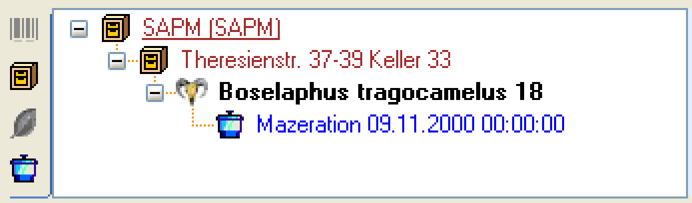
Here some expamples:
bones: bones or skeleton from vertebrates
cultures: living cultures of organisms
drawing: original line or color drawing
herbarium sheets: capsules or sheets as stored in a botanical collection
icones: icones, images etc. stored in a botanical collection
micr. slide: glass plate with sections of specimen for microscopic studies
specimen: specimen stored in a collection

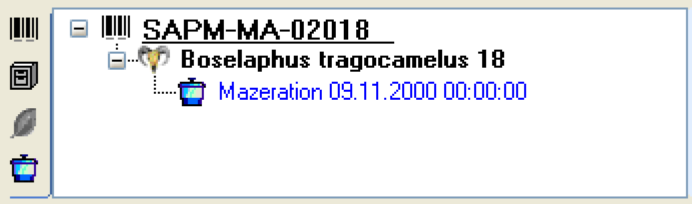
Specimens can be included in a transaction and every stored part of a specimen can be treated with several processings.

Data are stored in the table CollectionSpecimenPart.

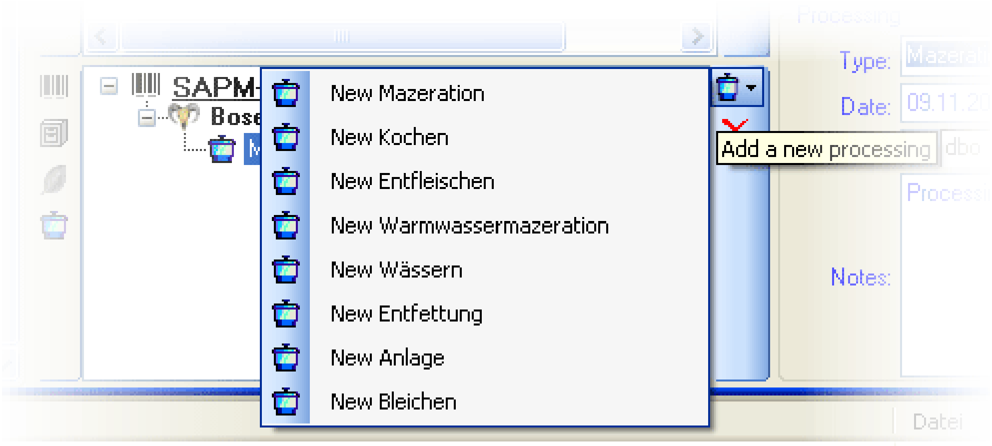
Processing

Every specimen can be processed, e.g. for preparation or preservation. Processings can be applied to a specimen or a part of a specimen. In the hierarchy for the parts the processings are indicated by the icon and a blue text.If there are any processings this will be indicated by the icon in the tool bar. You can hide or show the processings in the hierarchy with a click on the icon. The images below show a processing in either the collection or the specimen tree for the parts.


SAPM (SAPM)
Theresienstr. 37-39 Keller 33
Boselaphus tragocamelus 18
Mazeration 09.11.2000 00:00:00

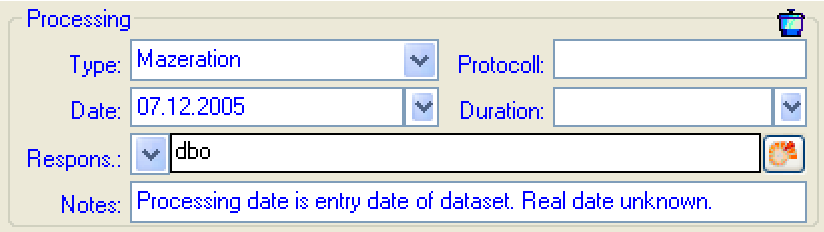

SAPM-MA-02018
Boselaphus tragocamelus 18
Mazeration 09.11.2000 00:00:00

You can enter a new processing for either the whole specimen or a part of the specimen. To do this select the specimen or a part in the hierarchy and then choose a processing from the list as shown below.

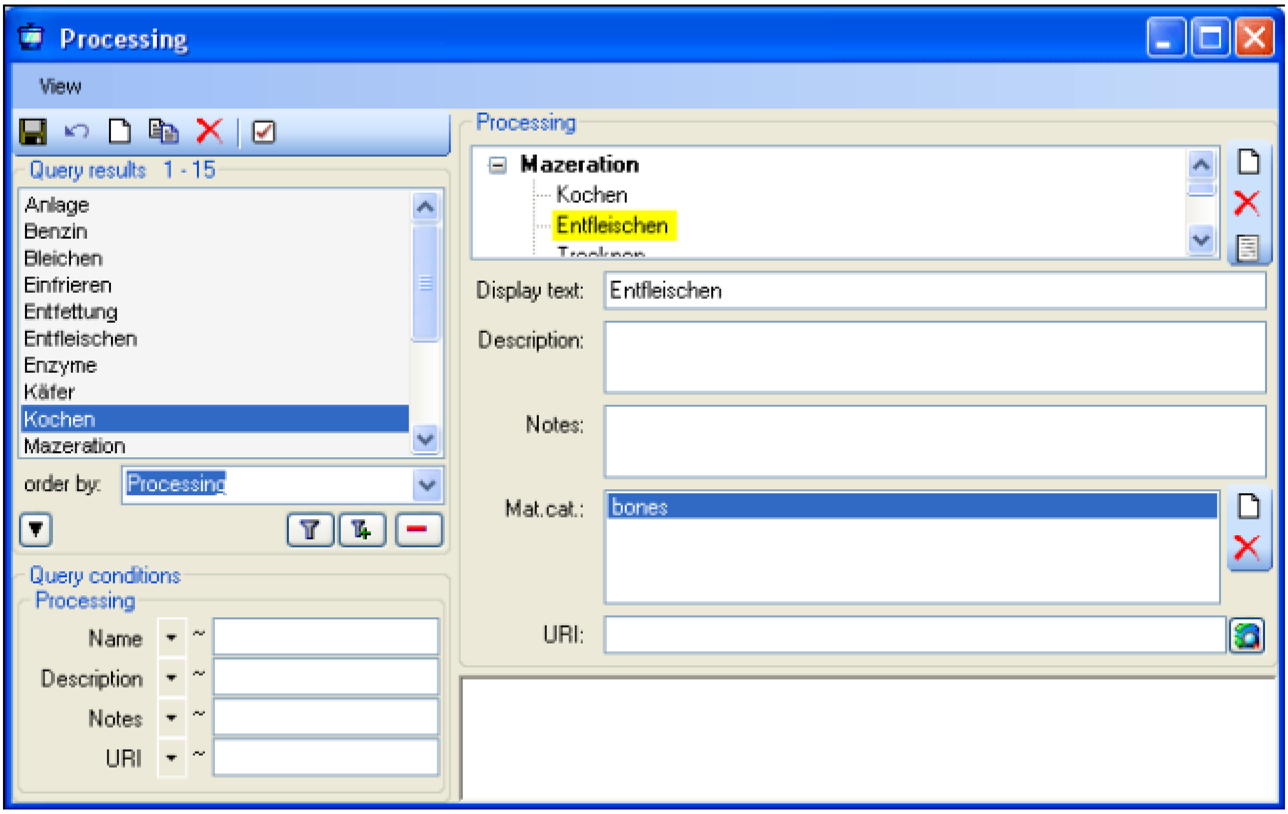


To delete a processing select it and click on the ✕ button. To edit the data for a processing select it in the hierarchy. The window will show you the fields related to the processing as shown below.

In the window select the type of your processing from the list.


Processing
Type: Mazeration
Protocoll:
Date: 07.12.2005
Duration:
Respons.: dbo
Notes: Processing date is entry date of dataset. Real date unknown.

If you have the proper rights you can edit the processing types under the menu entry **Administration - Processing...**



order by: Processing

Display text: Entfleischen

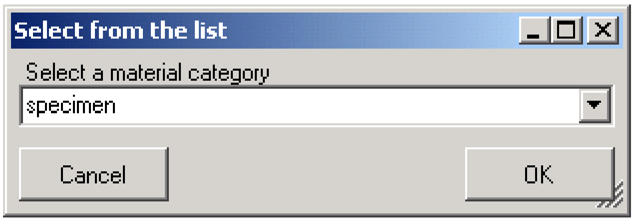
Description:

Notes:

Mat.cat.: bones

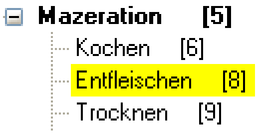
URI:

In this window you can define the processings used in your collection. To add a new processing click on the 🗋 button, to delete a processing select it and click on the ✕ button. The processings are related to material categories within the database. To add a new material category that should be connected to the selected processing, click on the 🗋button in the panel right of the material categories. A window will open and you have to select the material category that should be connected with the processing (see below).



Select a material category: specimen

For the import and export of data it is sometimes necessary to know the ID's of the analyis types. To see the ID's of the datasets, click on the **ID** button. Than the ID's will be shown as in the image below.

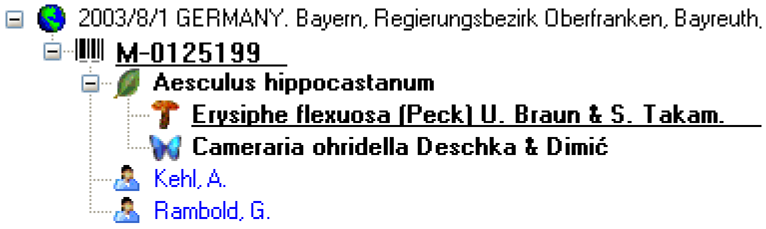


Mazeration [5]
- Kochen [6]
- Entfleischen [8]
- Trocknen [9]

The data of the processing are stored in the table CollectionSpecimenProcessing.

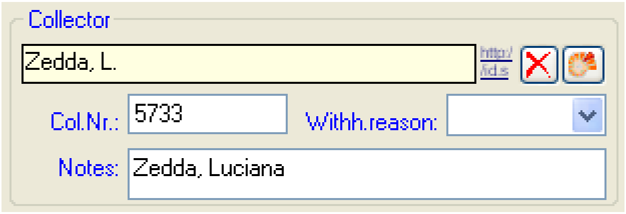
Collector

The people or groups responsible for the gathering of the specimen are stored in the table CollectionAgent. There may be several collectors for one specimen. In the tree the collectors are symbolized by the icon as shown below.



2003/8/1 GERMANY. Bayern, Regierungsbezirk Oberfranken, Bayreuth.
  M-0125199
    Aesculus hippocastanum
      Erysiphe flexuosa (Peck) U. Braun & S. Takam.
      Cameraria ohridella Deschka & Dimić
    Kehl, A.
    Rambold, G.

To hide or show the collectors in the tree use the icon in the left panel (it will change to a grey version with a yellow background when the authors are hidden). To insert a collector, choose either the specimen or an existing collector in the tree and then click on the icon in the right panel. To enter details for a collector, select it in the tree. In the right part of the window the fields for the details will then displayed (see below).



Collector
Zedda, L.
Col.Nr.: 5733
Withh.reason:
Notes: Zedda, Luciana

If a collector should refer to a dataset in the module DiversityAgents (where more details like addresses may be stored) click on the button. The sequence of the collectors (e.g. for print on a label) as shown in the tree can changed by with the ▲ and ▼ buttons in the panel on the right of the tree.

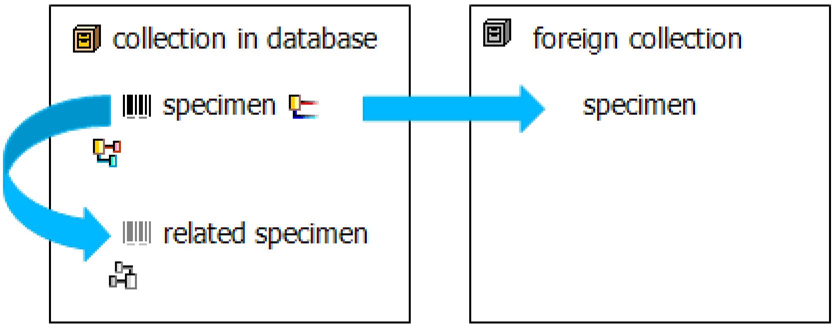
To remove a collector, select the entry in the tree and click on the ✕ button.

You can search for the gathering numbers of the collectors in the query.

The data of the collectors are stored in the table CollectionAgent.

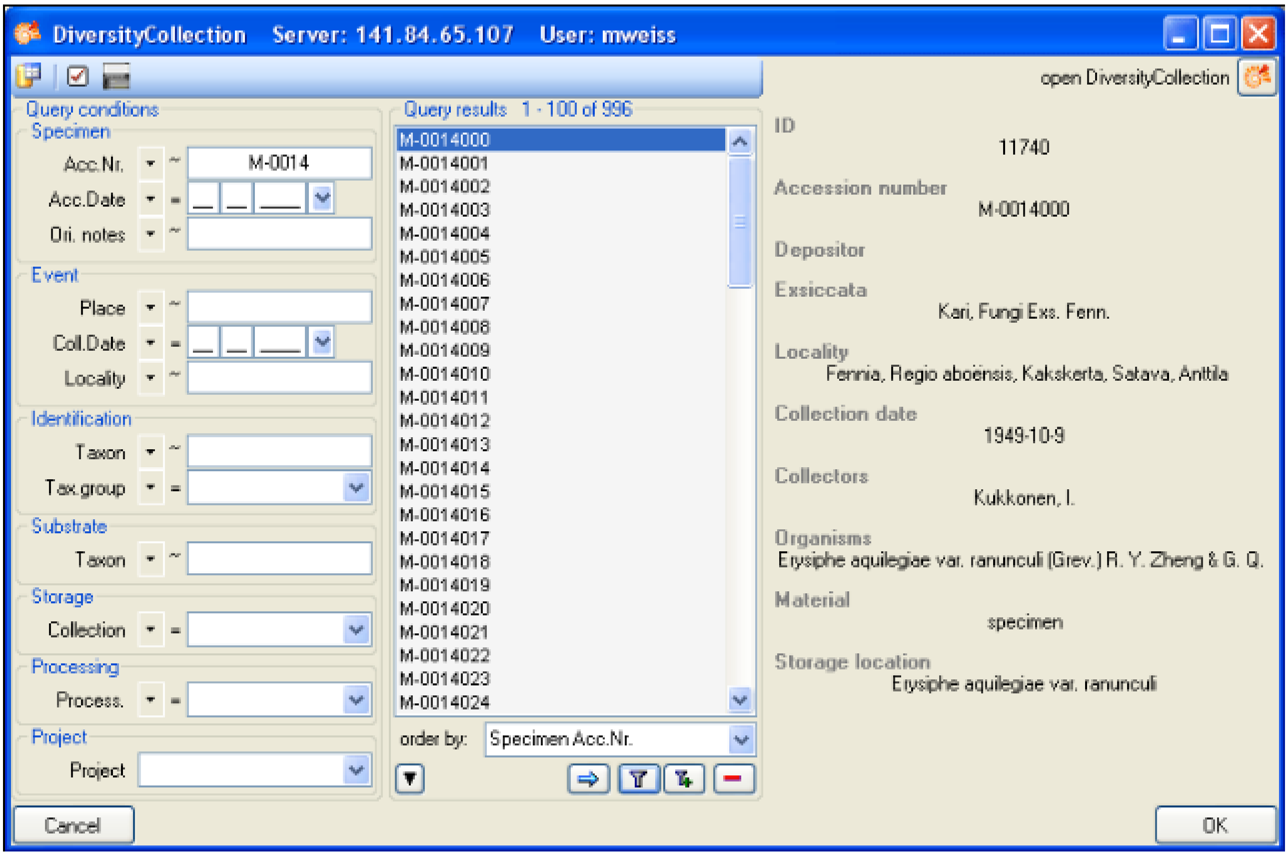
Relation

Each specimen may have relations to other specimens. This can be documented by adding relations to these specimens. To add a relation select the specimen in the tree (symbolized by the barcode). Then you can either add a relation to a local specimen using the button or a relation to a remote specimen using the button. To show or hide the relations in the tree use the and buttons.



Internal relation

To add an internal relation to a local specimen use the button. A window will open where you can search for the related specimen.



Acc.Nr. ~ M-0014
Acc.Date =
Ori. notes ~
Place ~
Coll.Date =
Locality ~
Taxon ~
Tax.group =
Taxon ~
Collection =
Process. =
Project

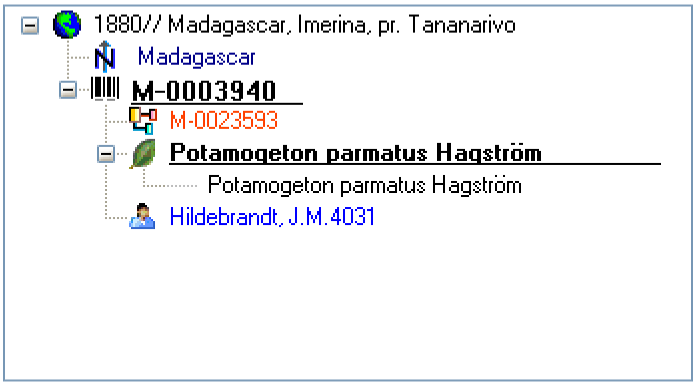
Query results 1 - 100 of 996

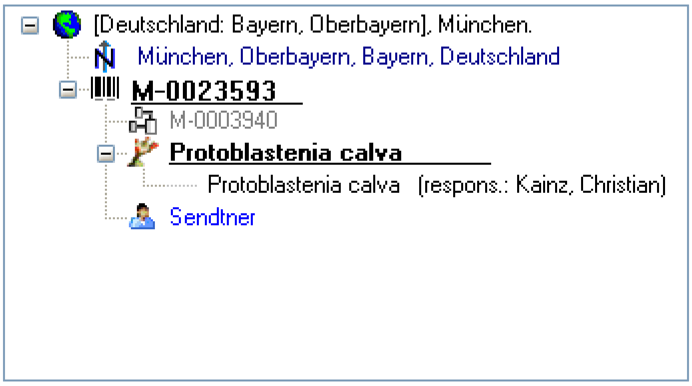
M-0014000
M-0014001
M-0014002
M-0014003
M-0014004
M-0014005
M-0014006
M-0014007
M-0014008
M-0014009
M-0014010
M-0014011
M-0014012
M-0014013
M-0014014
M-0014015
M-0014016
M-0014017
M-0014018
M-0014019
M-0014020
M-0014021
M-0014022
M-0014023
M-0014024

order by: Specimen Acc.Nr.

ID: 11740
Accession number: M-0014000
Depositor:
Exsiccata: Kari, Fungi Exs. Fenn.
Locality: Fennia, Regio aboënsis, Kakskerta, Satava, Anttila
Collection date: 1949-10-9
Collectors: Kukkonen, I.
Organisms: Erysiphe aquilegiae var. ranunculi (Grev.) R. Y. Zheng & G. Q.
Material: specimen
Storage location: Erysiphe aquilegiae var. ranunculi

Select the related specimen from the query result list and click OK to close the window and establish the relation. In the left image below you can see an internal relation , while the image on the right shows a reverse relation from another specimen.

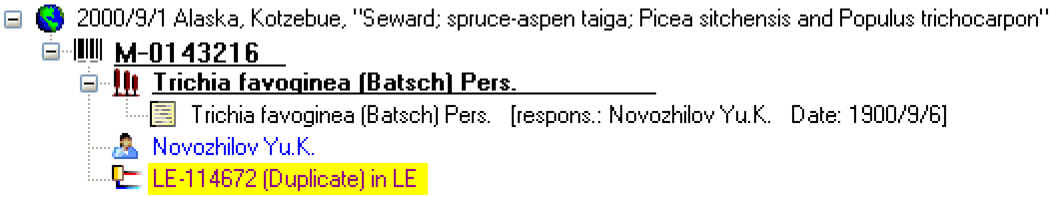

1880// Madagascar, Imerina, pr. Tananarivo
Madagascar
M-0003940
M-0023593
Potamogeton parmatus Hagström
Potamogeton parmatus Hagström
Hildebrandt, J.M.4031


[Deutschland: Bayern, Oberbayern], München.
München, Oberbayern, Bayern, Deutschland
M-0023593
M-0003940
Protoblastenia calva
Protoblastenia calva (respons.: Kainz, Christian)
Sendtner

In the case of internal relations you can navigate to the related specimens using the 🔍 button.

External relation

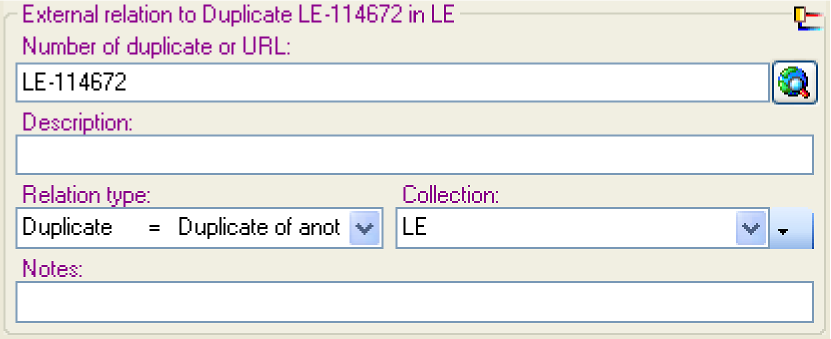
To add an external relation to a specimen that is not administrated in the database DiversityCollection use the button. In the image below you can see a relation to a specimen in a external collection.


2000/9/1 Alaska, Kotzebue, "Seward; spruce-aspen taiga; Picea sitchensis and Populus trichocarpon"
M-0143216
Trichia favoginea (Batsch) Pers.
Trichia favoginea (Batsch) Pers. [respons.: Novozhilov Yu.K. Date: 1900/9/6]
Novozhilov Yu.K.
LE-114672 (Duplicate) in LE

To delete a relation select it in the tree and click on the ✗ button.

Editing the data

To edit the data for a relation, click on the entry in the tree. In the right part of the window the details of the dataset will be shown (see below).



External relation to Duplicate LE-114672 in LE

Number of duplicate or URL: LE-114672

Description:

Relation type: Duplicate = Duplicate of anot

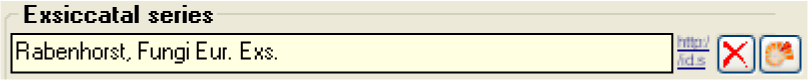
Collection: LE

Notes:

The data are stored in the table CollectionSpecimenRelation.

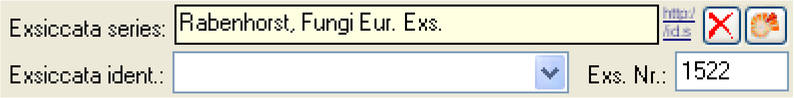
Exsiccatae

A specimen may be part of an exsiccatal series. These series are administrated in the Diversity Workbench module DiversityExsiccatae. To enter the exsiccatal series select the specimen or the organism resp. identification unit in the tree. With the specimen the exsiccatal series is shown at the base of the data form as shown below.



Rabenhorst, Fungi Eur. Exs.

As there may be several organisms with separate exsiccatal numbers in one specimen the numbers are handled together with the identification units. Select the concerned organism to enter data in the form as shown below.



Exsiccata series: Rabenhorst, Fungi Eur. Exs.

Exsiccata ident.:

Exs. Nr.: 1522

You can either type the name of the exsiccatal series or choose one from the module DiversityExsiccatae. If you click on the A window will open showing the link to the entry as derived from the module.

URI of Rabenhorst, Fungi Eur. Exs.

http://id.snsb.info/Exsiccatae/632034778

The data about the exsiccatal series are stored in the table CollectionSpecimen, the data about the number and the taxon are stored in the table IdentificationUnit.

Access to the data

To get access to the data, you have to take several hurdles. In DiversityCollection, you must be a member of one of the user groups. You have only access to those data, that are listed in the projects you have access to. For external users, data may be blocked by entries in the data witholding reasons.

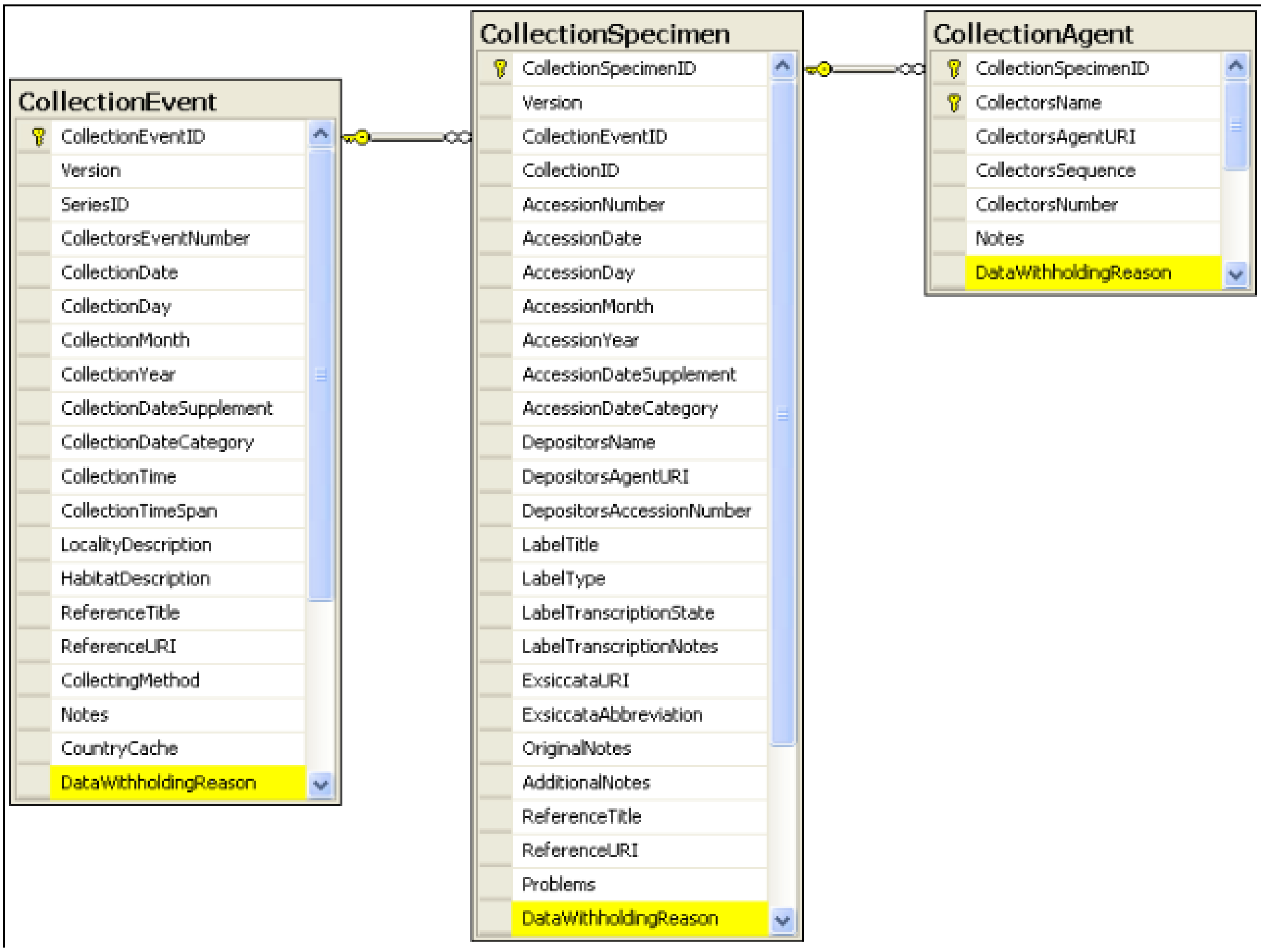
Availability of datasets

The data of certain parts of the database can be blocked for remote access. If you want to prevent access for the whole dataset, enter your reason in the field **Withholding reason** in the header (see below).

Acc.No. M-0040397
Erysiphe aquilegiae var. ranunculi (Grev.) U. Braun
ID (Specimen / Event) 135548 / 211558
Version 3 / 1
Withhold. reason

If you want to block only the access to the data of the collection event or the collector choose them in the tree and enter your reason for withholding the data in the corresponding fields. The data will only be published if these fields are empty.

Within the database a user has only access to the data of those projects for which he has the permission. If a dataset belongs to a certain project, this is stored in the table CollectionProject. To prevent a publication of the data these can be blocked for the whole dataset (table CollectionSpecimen), for the locality and collection site informations (table CollectionEvent) and for the collectors (table CollectionAgent) - see overview below - and for all image tables: CollectionSpecimenImage, CollectionEventImage, CollectionEventSeriesImage.



CollectionEvent
- CollectionEventID
- Version
- SeriesID
- CollectorsEventNumber
- CollectionDate
- CollectionDay
- CollectionMonth
- CollectionYear
- CollectionDateSupplement
- CollectionDateCategory
- CollectionTime
- CollectionTimeSpan
- LocalityDescription
- HabitatDescription
- ReferenceTitle
- ReferenceURI
- CollectingMethod
- Notes
- CountryCache
- DataWithholdingReason

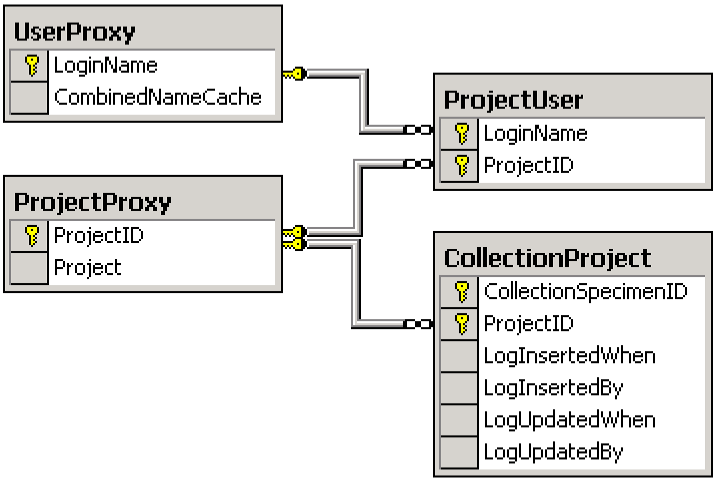
CollectionSpecimen
- CollectionSpecimenID
- Version
- CollectionEventID
- CollectionID
- AccessionNumber
- AccessionDate
- AccessionDay
- AccessionMonth
- AccessionYear
- AccessionDateSupplement
- AccessionDateCategory
- DepositorsName
- DepositorsAgentURI
- DepositorsAccessionNumber
- LabelTitle
- LabelType
- LabelTranscriptionState
- LabelTranscriptionNotes
- ExsiccataURI
- ExsiccataAbbreviation
- OriginalNotes
- AdditionalNotes
- ReferenceTitle
- ReferenceURI
- Problems
- DataWithholdingReason

CollectionAgent
- CollectionSpecimenID
- CollectorsName
- CollectorsAgentURI
- CollectorsSequence
- CollectorsNumber
- Notes
- DataWithholdingReason

Permissions for projects

The access for the user to the data within the database are stored in the tables shown below. The tables UserProxy and ProjectProxy are related to the Diversity Workbench modules

DiversityUsers and DiversityProjects respectively. See user administration for further details.



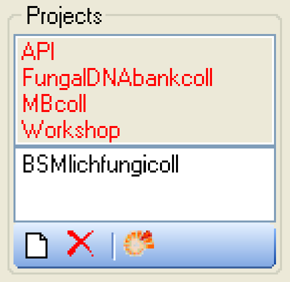
Projects

Every collection specimen can be assigned to any number of projects. To assign a specimen to a project click on the 🗋 button. To remove it from a project, select the project from the list and click on the ✕ button.

Projects

BSMeryscoll
BSMschiefcoll

If there are projects, to which you have no access to, these will be listed in a separate list at the top as shown below.



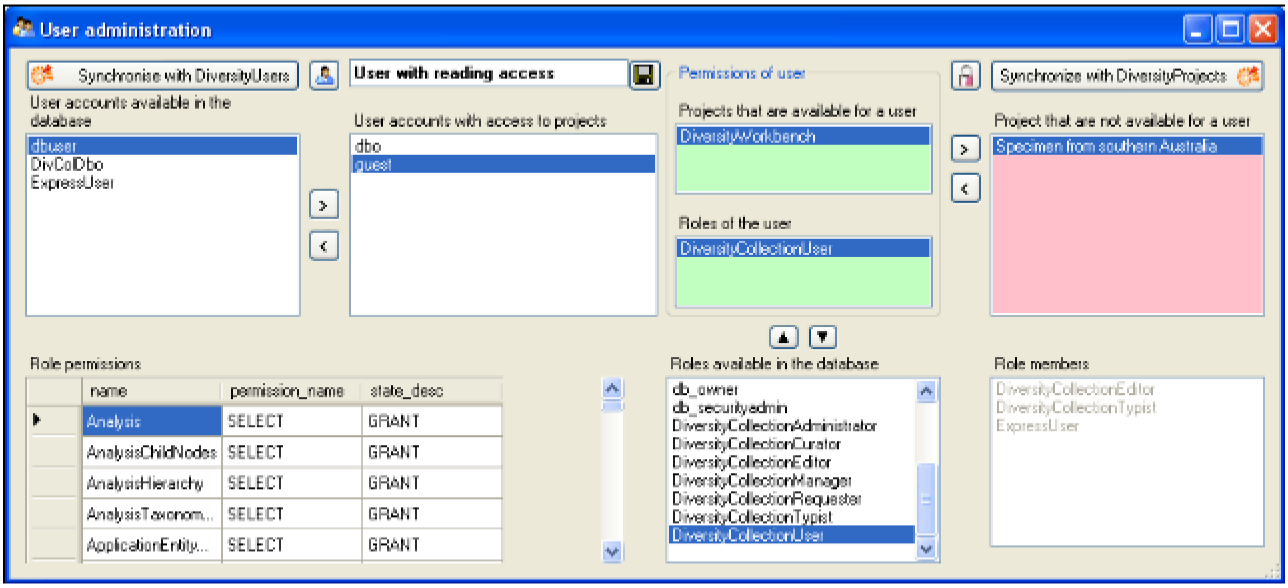
Projects

API
FungalDNAbankcoll
MBcoll
Workshop

BSMlichfungicoll

Data are stored in the table CollectionProject.

Details upon the projects within the Diversity Workbench are stored in the database DiversityProjects. To open a project to see further information upon a project click on the button. To edit details in the projects you need the application **DiversityProjects.exe** in your application directory and access to the database DiversityProjects. To synchronize the projects listed in DiversityProjects you can use the synchronize functionality in the user administration window as shown below. If DiversityProjects is not available you can create a new project with the 🔒 button. If DiversityProjects is available, use the synchronize functionality Synchronize with DiversityProjects.



User accounts available in the database

dbuser
DivColDbo
ExpressUser

User accounts with access to projects

dbo
guest

Projects that are available for a user

DiversityWorkbench

Roles of the user

DiversityCollectionUser

Project that are not available for a user

Specimen from southern Australia

Role permissions

name	permission_name	state_desc
Analysis	SELECT	GRANT
AnalysisChildNodes	SELECT	GRANT
AnalysisHierarchy	SELECT	GRANT
AnalysisTaxonom...	SELECT	GRANT
ApplicationEntity...	SELECT	GRANT

Roles available in the database

db_owner
db_securityadmin
DiversityCollectionAdministrator
DiversityCollectionCurator
DiversityCollectionEditor
DiversityCollectionManager
DiversityCollectionRequester
DiversityCollectionTypist
DiversityCollectionUser

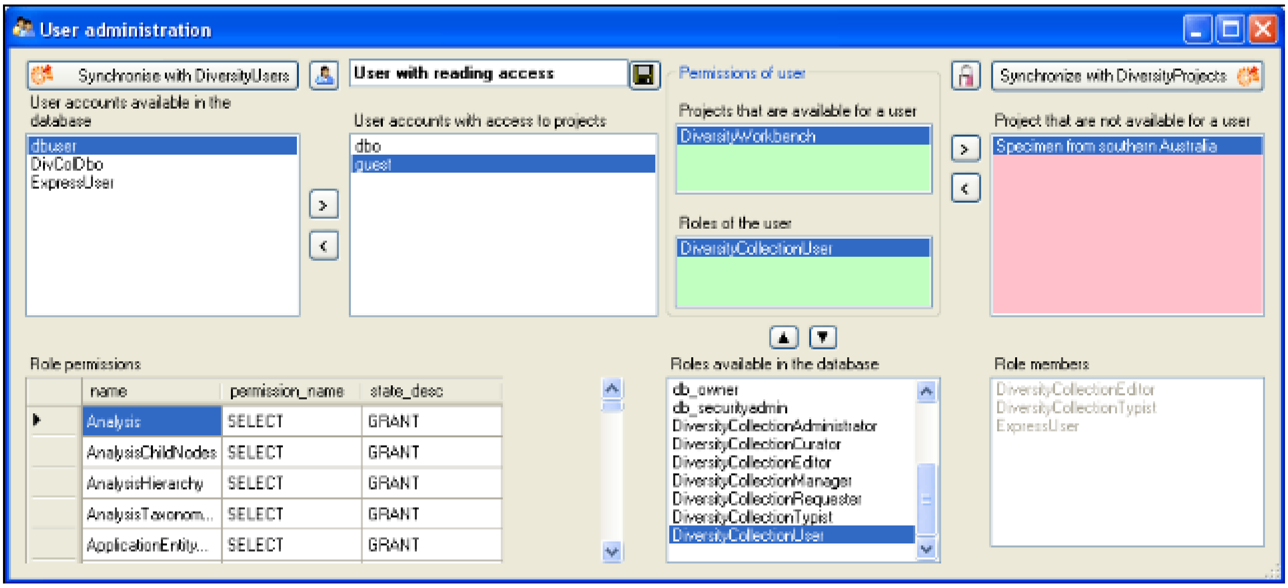
Role members

DiversityCollectionEditor
DiversityCollectionTypist
ExpressUser

User administration

The permissions of users in the database are set via user groups resp. roles in the database and the access to the projects. To set the permissions choose **Administration** - **User ...** from the menu. A window as shown below will open. Here, among other administration tasks, you can change the permissions of the users. The first list shows the user accounts that are available in the database but have no access to any of the projects. To synchronize this list with the Diversity Workbench module DiversityUsers click on the **Synchronise with DiveristyUsers** button. To create a new SQL-Server user, click on the button. To create a new Windows user with access to the database resp. allow an existing user the access to the database use the Microsoft SQL Server Management Studio (see the installation section for further details). To permit access to a project click on the > button. To remove a user from this list use the < button.

The area **Permission of user** shows the projects a user has access to and the roles of the user within the database. To move users between the lists Projects that are available for a user and Projects that are not avialable for a user use the > and < buttons. To create a new project click on the button. If you use the Diversity Workbench module DiversityProjects, you can create a new project there and user the **Synchronise with DiversityProjects** button. To change the roles of a user use the ▲and ▼ buttons. Underneath the project list for a user you find the list of the Roles of the user. This list can be changed by using the and buttons. Underneath the roles list you find the list with the roles available in the database. On the left side of this list the permissions of the selected role are listed and on the right side the users with this role (Role members).



User accounts available in the database:
dbuser
DivColDbo
ExpressUser

User accounts with access to projects:
dbo
guest

Projects that are available for a user: DiversityWorkbench

Roles of the user: DiversityCollectionUser

Project that are not available for a user: Specimen from southern Australia

Role permissions:

name	permission_name	state_desc
Analysis	SELECT	GRANT
AnalysisChildNodes	SELECT	GRANT
AnalysisHierarchy	SELECT	GRANT
AnalysisTaxonom...	SELECT	GRANT
ApplicationEntity...	SELECT	GRANT

Roles available in the database:
db_owner
db_securityadmin
DiversityCollectionAdministrator
DiversityCollectionCurator
DiversityCollectionEditor
DiversityCollectionManager
DiversityCollectionRequester
DiversityCollectionTypist
DiversityCollectionUser

Role members:
DiversityCollectionEditor
DiversityCollectionTypist
ExpressUser

The permissions of the roles resp. user groups are shown in the lower left part of the form.

The role **DiversityCollectionUser** can see the data within the permitted projects, but can not change anything.

The role **DiversityCollectionTypist** has the same rights as the role DiversityCollectionUser and can edit a part of the user defined data.

The role **DiversityCollectionRequester** has the same rights as the role DiversityCollectionUser and in addition can place requests for specimens.

The role **DiversityCollectionManager** has the same rights as the role DiversityCollectionUser and in addition can handle transactions, i.e. shipments of specimen between collections and edit the collections for the collections he has the permission.

The role **DiversityCollectionEditor** can change the user defined parts of the data.

The role **DiversityCollectionCurator** has the combined rights of the roles DiversityCollectionEditor and DiversityCollectionManager.

The role **DiversityCollectionAdministrator** can delete data, edit the contents of internal tables, change user permissions etc.

Security

A user can be in 5 groups with diverse rights in the database where the higher groups have all rights of lower groups in addition to special rights for this group, e.g. DiversityCollectionUser can only read the data of certain tables while DiversityCollectionTypist has the rights of DiversityCollectionUser and additionally can edit the data in certain tables - see overview below.

DiversityCollectionAdministrator
DiversityCollectionCurator
DiversityCollectionEditor
DiversityCollectionManager
DiversityCollectionRequester
DiversityCollectionTypist
DiversityCollectionUser

Summarzied overview of the permissions of the groups

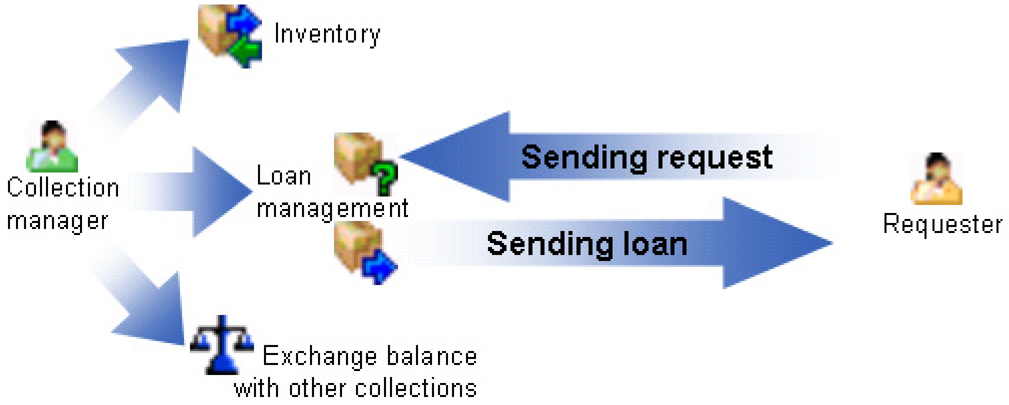
Role	**Permissions in addition to lower role resp. user group**
Administrator	Delete data, edit user permissions
Curator	Combines the roles editor and collection manager
Editor	Create new entries and delete details (not whole datasets)
Manager	Administration of collections, handling loans etc.
Requester	Has the right to place requests for specimen
Typist	Edit data
User	See the data of the data tables

If you are an Administrator you can add a user to one of these groups

Any user may have access to several projects.

Collection management

Collections are managed by **collection managers**, who organize the transfer of specimen between collections and track the **exchange balances**. Any transfer of specimen is organized via **transactions**. To be able to place are request for specimen from a collection, you must be in the group of **requesters** for this requested collection and a collection manager for the requesting collection. An overview is given in the image below.

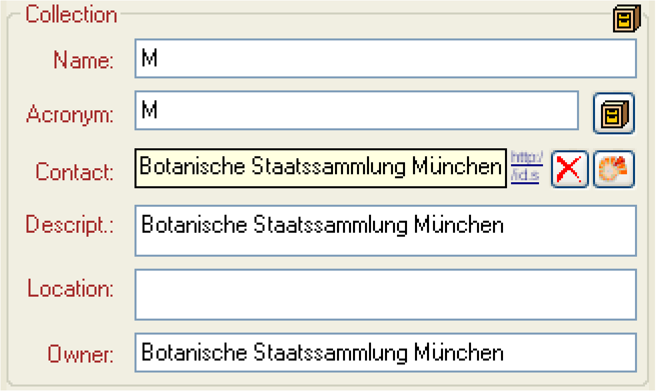


Collection

The organisms in a specimen can be stored in several collections. To see the place where a specimen or parts of it are stored use the lower tree and click on the icon to select the display according to the collections as shown below.

Botanische Staatssammlung München [M]
M-Fungi
Trichia persimilis P.Karst.
Trichia persimilis P.Karst.
Trichia persimilis P.Karst.
Trichia persimilis P.Karst.

In the tree shown above select the collection to display the datafields as shown below.



Collection

Name: M

Acronym: M

Contact: Botanische Staatssammlung München

Descript.: Botanische Staatssammlung München

Location:

Owner: Botanische Staatssammlung München

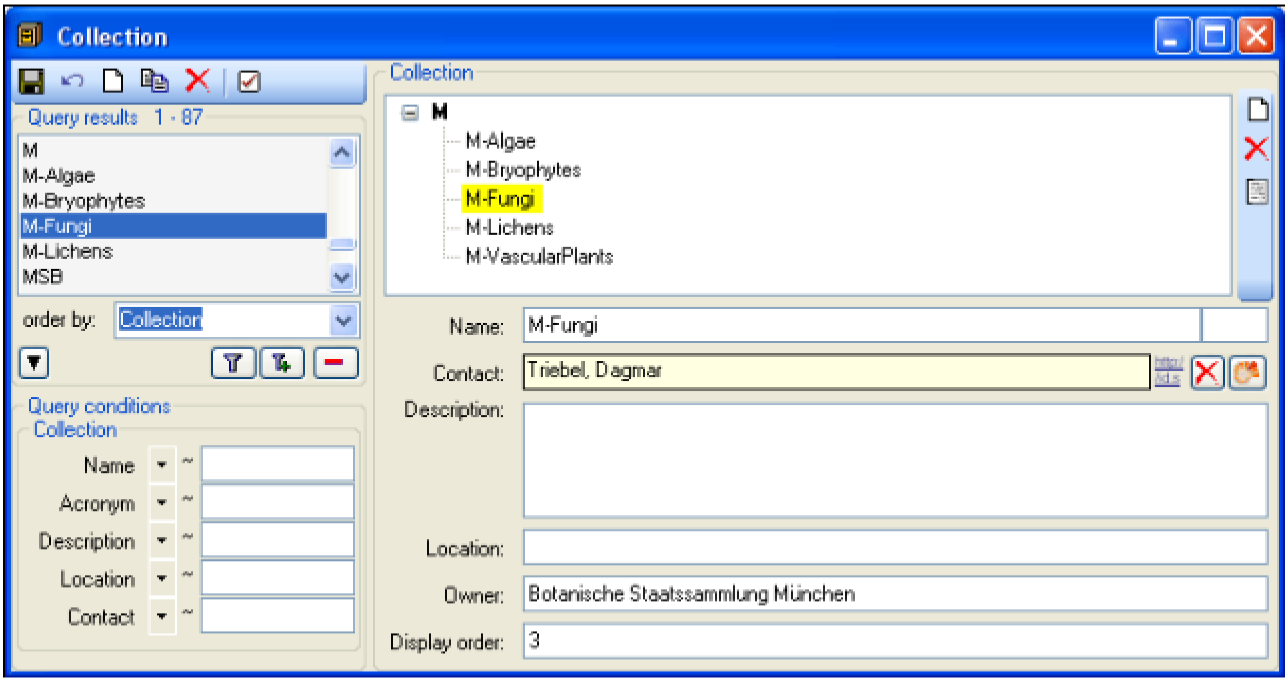
To be able to edit the detais of a collection, you must be a collection manager of this collection. The restrictions for the access for editing the collections are defined in the collection manager part.

At the base of the fields you find the default collection, used for the creation of new specimen parts. Specimen parts that are not created as a part of another part will be placed in this collection. Use the button to edit this entry.

Default collection for new specimen parts

M - M-Algae - Diatom collection of F.J.Weinzierl - Dried vouchers - Box 2

If you need further information about a collection click on the button or choose **Administration - Collections...** from the menu to open the window for the collection administration (this menu entry is only available for collection managers). This will open a window as shown below where you can edit the collections used in your database for which you are a collection manager.



M
M-Algae
M-Bryophytes
M-Fungi
M-Lichens
MSB

order by: Collection

Collection

- M
  - M-Algae
  - M-Bryophytes
  - M-Fungi
  - M-Lichens
  - M-VascularPlants

Name: M-Fungi

Contact: Triebel, Dagmar

Description:

Location:

Owner: Botanische Staatssammlung München

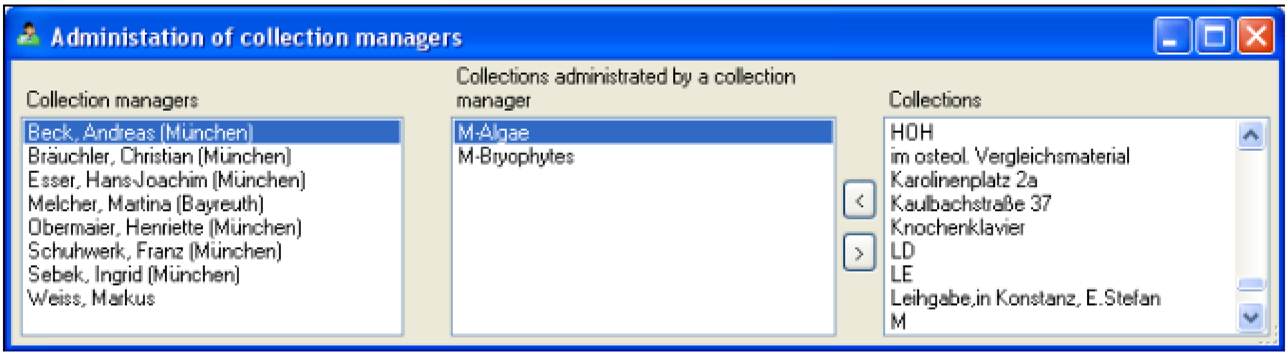
Display order: 3

The specimens stored in a selected collection are listed in the specimen list. You can hide / show this list using the ☒ / 🗎 button. To change to a specimen from this list click on the 🔭 button.

For details about handling the data see the data section. Data of the collections are stored in the table Collection.

Collection manager

Collection managers are users with the right to edit the transactions. To edit the collection managers you must be in the administator group. Choose - **Administration** - **Collection managers** from the menu to open the editing window for the collection managers as shown below.



Collection managers:

- Beck, Andreas (München)
- Bräuchler, Christian (München)
- Esser, Hans-Joachim (München)
- Melcher, Martina (Bayreuth)
- Obermaier, Henriette (München)
- Schuhwerk, Franz (München)
- Sebek, Ingrid (München)
- Weiss, Markus

Collections administrated by a collection manager:

- M-Algae
- M-Bryophytes

Collections:

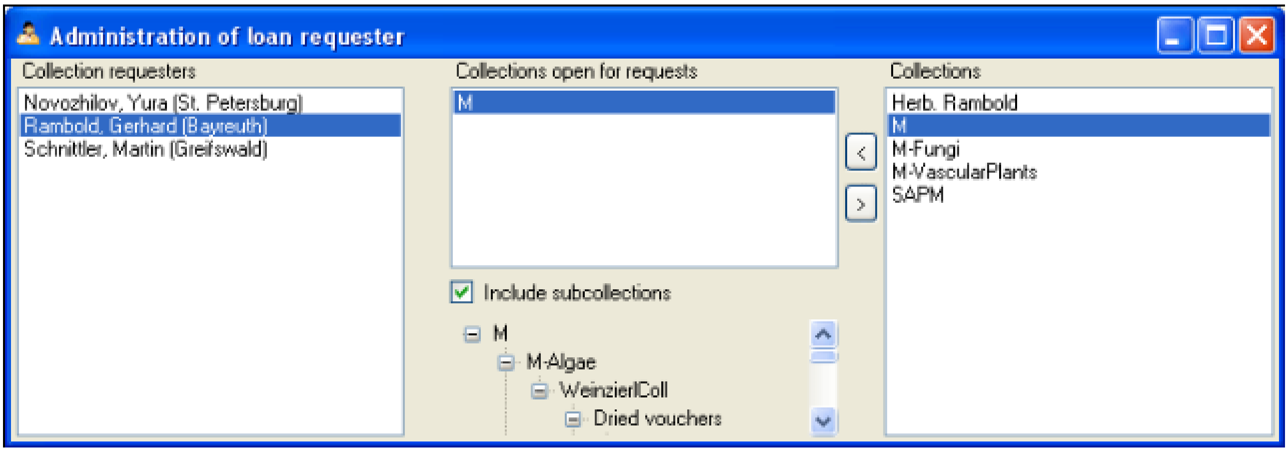
- HOH
- im osteol. Vergleichsmaterial
- Karolinenplatz 2a
- Kaulbachstraße 37
- Knochenklavier
- LD
- LE
- Leihgabe,in Konstanz, E.Stefan
- M

Use the **<** and **>** buttons to edit the list of the collections for which the selected collection manager can create and edit transactions.

For details about handling the collections see the transaction section. Data of the collections are stored in the table CollectionManager.

Collection requester

Collection requesters are users with the right to place requests for loans in other collections. To edit the collection requesters you must be a collection manager for the requested collection. Choose - **Administration** - **Collection requesters** from the menu to open the editing window for the collection requesters as shown below. The list on the left contains all users that are in the group Collection requesters. See user administration for further details. Select a user in this list to edit the accessible collections for this requester.



Collection requesters:
- Novozhilov, Yura (St. Petersburg)
- Rambold, Gerhard (Bayreuth)
- Schnittler, Martin (Greifswald)

Collections open for requests:
- M

☑ Include subcollections

- M
  - M-Algae
    - WeinzierlColl
      - Dried vouchers

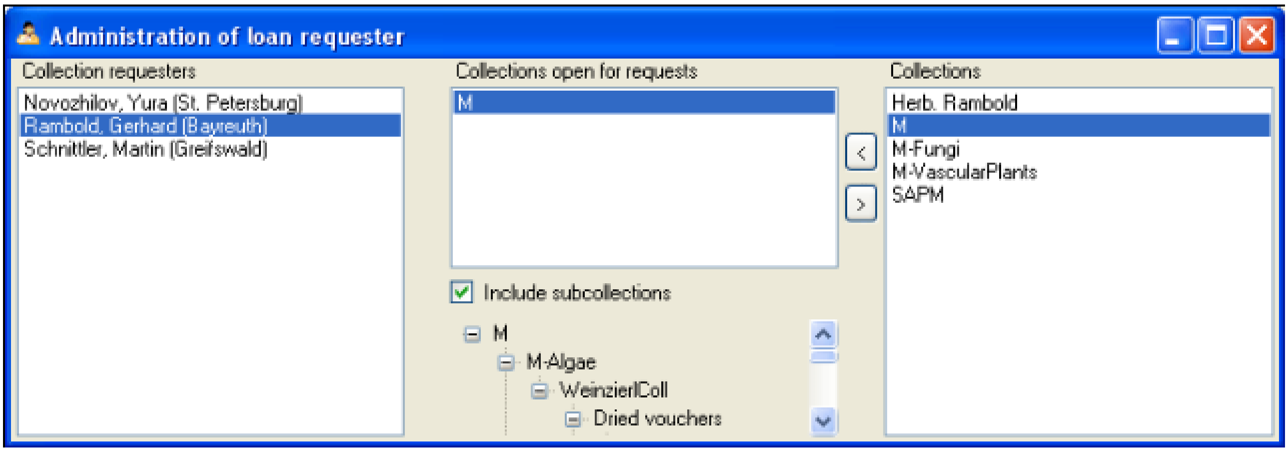
Collections:
- Herb. Rambold
- M
- M-Fungi
- M-VascularPlants
- SAPM

Use the **<** and **>** buttons to edit the list of the collections for which the selected requester can place a request. If the option Include subcollections is choosen, the requester can send requests for all subcollections of a collection. Otherwise the requests can only be sent for the collections in the list. The subcollections are shown in the hierarchy underneath the list.

For details about handling the collections see the transaction section. Data of the collections are stored in the table CollectionRequester.

Transactions - Request

To enter a request for a loan you must be in the user group resp. role DiversityCollectionRequester (see user administration for further details). This is done by the collection managers for their collections. To enable a user to place requests, choose **Administration - Loan requesters** ... from the menu. A window as shown below will open.



Collection requesters
- Novozhilov, Yura (St. Petersburg)
- Rambold, Gerhard (Bayreuth)
- Schnittler, Martin (Greifswald)

Collections open for requests
- M

☑ Include subcollections

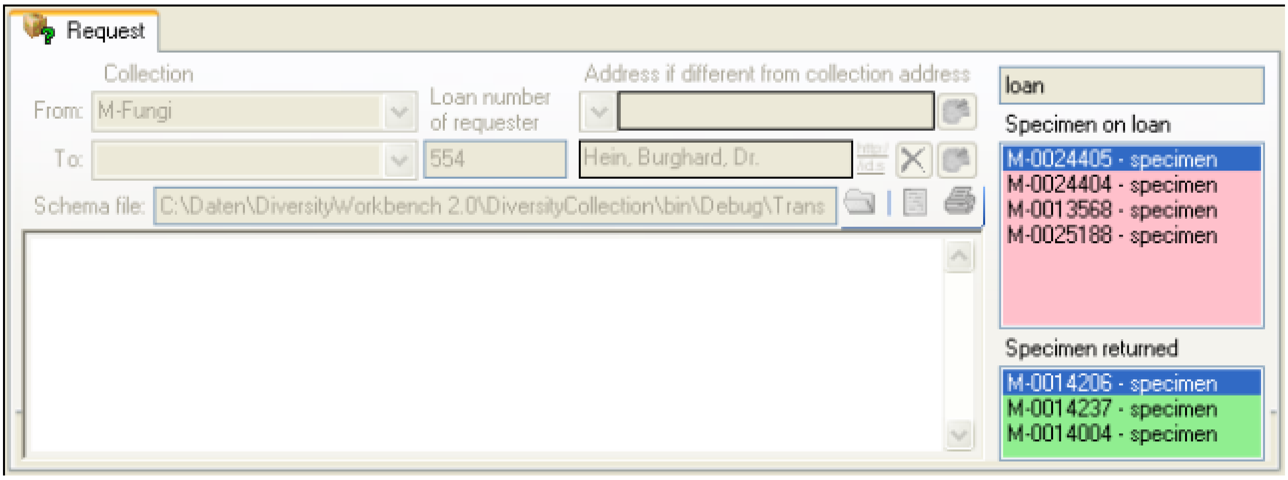
- M
  - M-Algae
    - WeinzierlColl
      - Dried vouchers

Collections
- Herb. Rambold
- M
- M-Fungi
- M-VascularPlants
- SAPM

As a collection manager you can give requesters access to the collections you manage. Click on the **<** or **>** buttons to add or remove collections from the list for which a user can place a request. If the option **Include subcollections** is choosen, a user can request for specimens stored in subcollections of the administrating collection. To give you an overview of the subcollections, the hierarchy of the collection is shown in the tree below the list.

If you are a collection manager and there are requests for your collections, the administration menu will contain a **Loan requests ...** entry. Choose it to open a window listing the requests for specimen in your collections.

If you have entered request for specimen in a foreign collection, the administration menu will contain a **My requests...** entry. To inspect your request choose this entry from the menu to open a window as shown below. The window will show your requests and loans from foreign collections.



Collection
From: M-Fungi
To:
Loan number of requester: 554
Address if different from collection address: Hein, Burghard, Dr.
Schema file: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\Trans

loan

Specimen on loan
- M-0024405 - specimen
- M-0024404 - specimen
- M-0013568 - specimen
- M-0025188 - specimen

Specimen returned
- M-0014206 - specimen
- M-0014237 - specimen
- M-0014004 - specimen

To enter a new request, click on the button. Use the button to search for specimen in the collection and the button to remove unwanted specimen from your list.

Transactions

Prerequisites

The transfer of a specimen between collections is handled with transactions. There are two prerequisites to use transactions in DiversityCollection. You must be in the user group resp. role DiversityCollectionManager (see user administration).

DiversityCollectionAdministrator
DiversityCollectionCurator
DiversityCollectionEditor
DiversityCollectionManager
DiversityCollectionRequester
DiversityCollectionTypist
DiversityCollectionUser

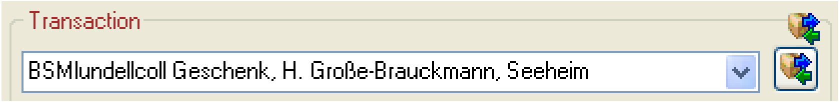
and the collections you have the right to handle transactions for must have been assigned to you as shown in the managers section.

Visibility of transactions

A specimen may be involved in diverse transactions between collections like loan, purchase, gift or exchange. The transactions are shown in the tree for the parts of a specimen and symbolized with an icon. For specimens that are still on loan an icon as shown while a returned loan is symbolized with an icon (see image below).

- Botanische Staatssammlung München [M]
  - M-Fungi
    - Arthrocladiella mougeotii
      - 14.11.2007: Loan to B. Hein - 2007
    - Arthrocladiella mougeotii (Lév.) Vassilkov
      - 28.03.2008: Loan to D. Nagel
- Botanischer Garten und Botanisches Museum Berlin-Dahlem [B]
  - Arthrocladiella mougeotii (Lév.) Vassilkov
    - Exchange with B

If you are a collection manager you can take a look at the details of a transaction. Select the specimen part in the tree and then click on the button that will be shown in the details next to the name of the transaction. This will open the window for the transactions as described below.



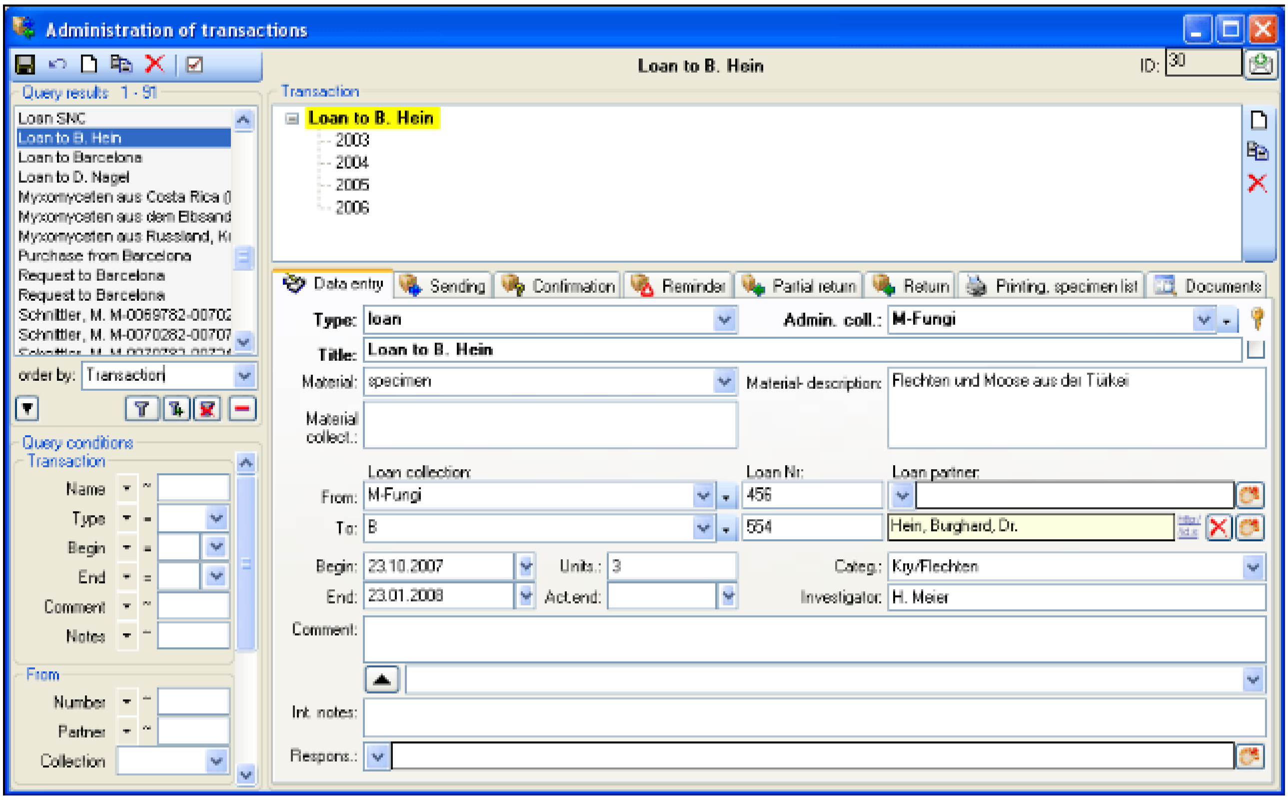
Transaction

BSMlundellcoll Geschenk, H. Große-Brauckmann, Seeheim

To edit the transactions choose **Administration - Transactions** from the menu. A window will open as shown below. In the tree at the top the relations between the transactions are shown. To create a transaction, dependent on another transaction, choose the superior transaction in the tree and click on the button in the panel right from the tree. With the button you can create a copy of a transaction. To delete a specimen from the list click on the ✕ button. The data for the transactions are stored in the tables Transaction and CollectionSpecimenTransaction.

Data entry

On this page you can edit the data of a transaction. Every transaction is linked to an administrating collection (symbolized by the key), and can be edited exclusively by collection managers of this collection. To appoint managers choose **Administration - Managers** from the menu.



Loan to B. Hein

ID: 30

Loan SNC
Loan to B. Hein
Loan to Barcelona
Loan to D. Nagel
Myxomyceten aus Costa Rica (
Myxomyceten aus dem Elbsand
Myxomyceten aus Russland, Ki
Purchase from Barcelona
Request to Barcelona
Request to Barcelona
Schnittler, M. M-0069782-00702
Schnittler, M. M-0070282-00707

order by: Transaction

Loan to B. Hein
2003
2004
2005
2006

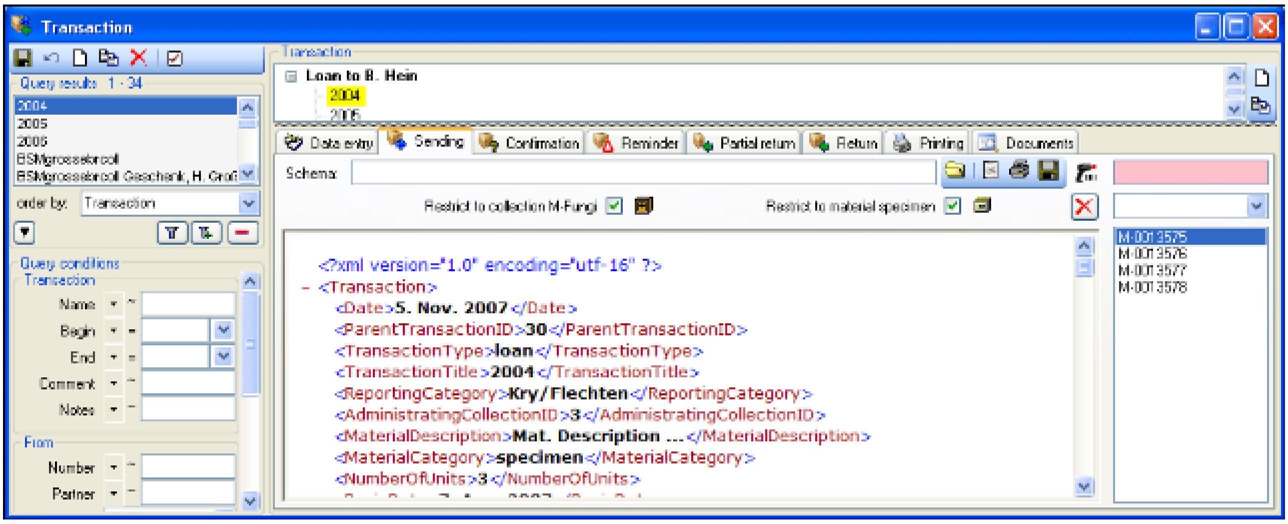
Type: loan
Admin. coll.: M-Fungi
Title: Loan to B. Hein
Material: specimen
Material- description: Flechten und Moose aus der Türkei
Material collect.:
Loan collection: From: M-Fungi
Loan Nr: 456
Loan partner:
To: B
Loan Nr: 554
Loan partner: Hein, Burghard, Dr.
Begin: 23.10.2007
Units.: 3
Categ.: Kry/Flechten
End: 23.01.2008
Act.end:
Investigator: H. Meier
Comment:
Int. notes:
Respons.:

Depending on the type of the transaction additional tab pages will appear for creating documents.

Transaction type	***Tab pages***					
Sending	Loan	Borrow	Exchange	Gift	Purchase	
Confirmation	Loan	Borrow	Exchange	Gift	Purchase	Request
Reminder	Loan	Borrow	Exchange	Gift	Purchase	
Partial return	Loan	Borrow				
Return	Loan	Borrow				
Printing	Loan	Borrow	Exchange	Gift	Purchase	Request
Documents	Loan	Borrow	Exchange	Gift	Purchase	Request
Balance			Exchange			

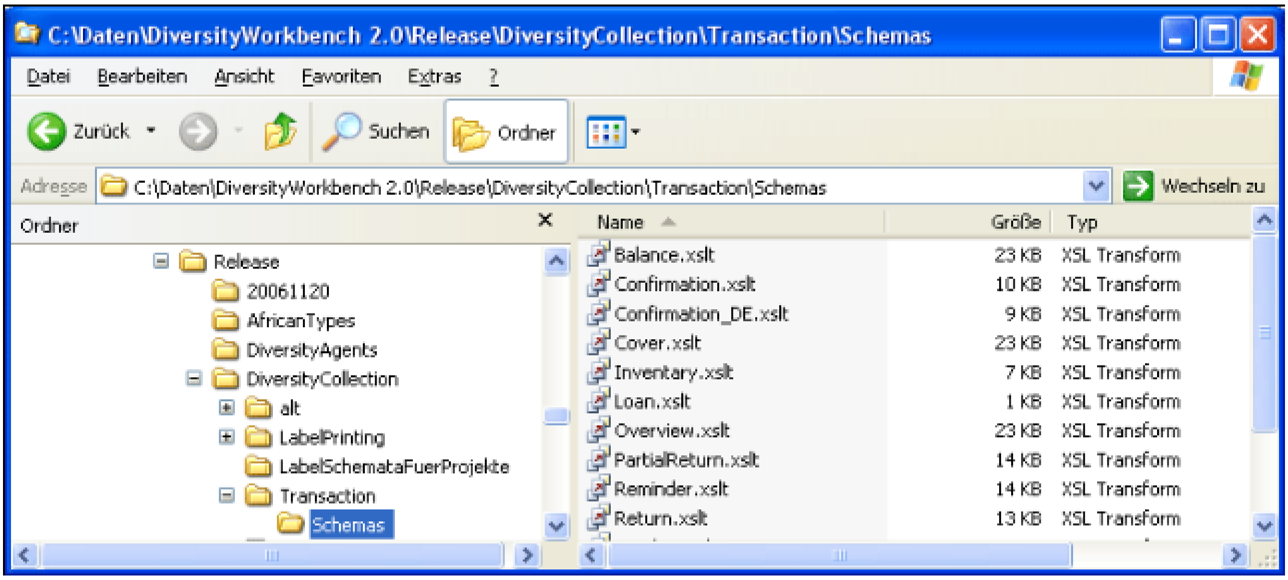
Common notes

On the tab pages for generating documents you have to specify a xml-schema for your document - click on the 📂 button to choose one of the predifined schemas or create your own schema. If you do not specify a schema (i.e. the field for the path of the schema is empty - see below) for your form you will see the XML output created by the database as shown below.



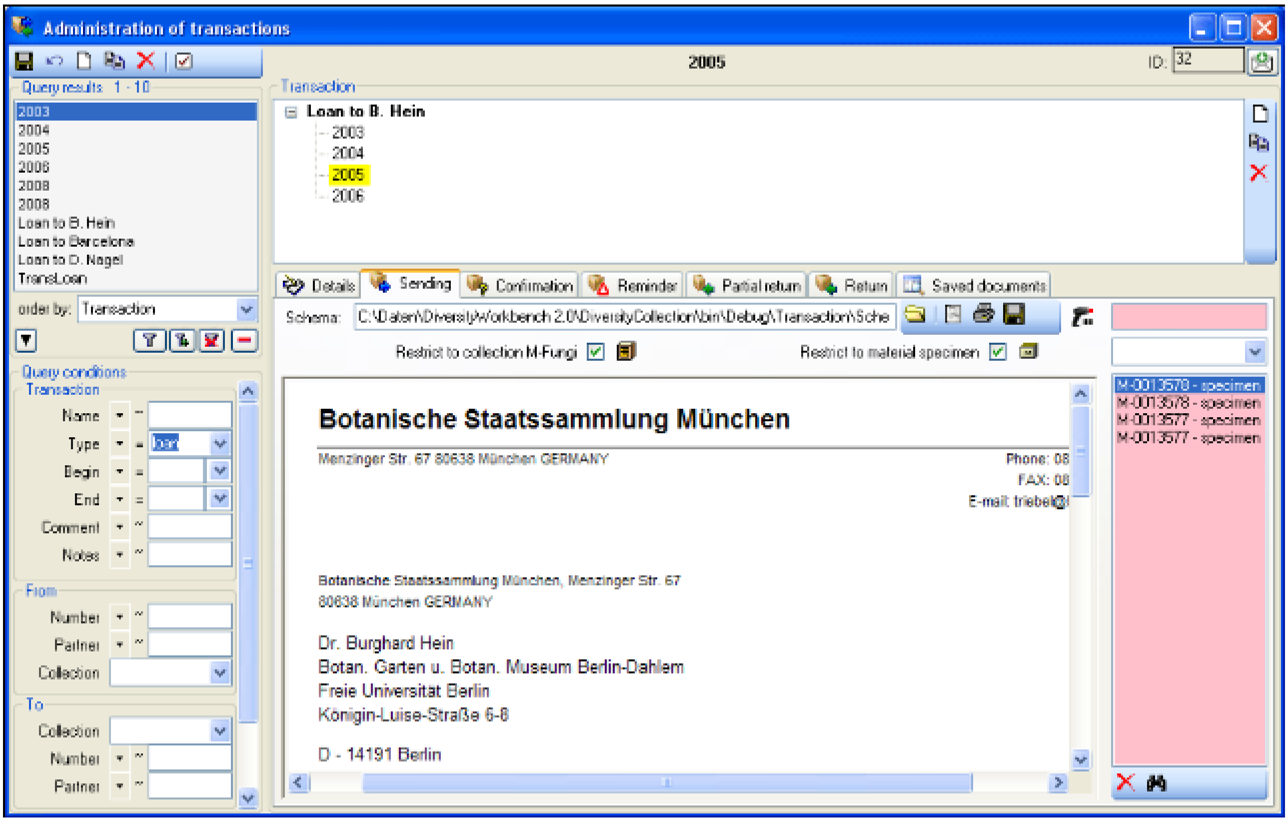
```
<?xml version="1.0" encoding="utf-16" ?>
- <Transaction>
    <Date>5. Nov. 2007</Date>
    <ParentTransactionID>30</ParentTransactionID>
    <TransactionType>loan</TransactionType>
    <TransactionTitle>2004</TransactionTitle>
    <ReportingCategory>Kry/Flechten</ReportingCategory>
    <AdministratingCollectionID>3</AdministratingCollectionID>
    <MaterialDescription>Mat. Description ...</MaterialDescription>
    <MaterialCategory>specimen</MaterialCategory>
    <NumberOfUnits>3</NumberOfUnits>
```

To choose a schema click on the button and select a schema from the list. DiversityCollection contains several ready to use schemas in the folder **Transaction - Schemas**.



Name	Größe	Typ
Balance.xslt	23 KB	XSL Transform
Confirmation.xslt	10 KB	XSL Transform
Confirmation_DE.xslt	9 KB	XSL Transform
Cover.xslt	23 KB	XSL Transform
Inventary.xslt	7 KB	XSL Transform
Loan.xslt	1 KB	XSL Transform
Overview.xslt	23 KB	XSL Transform
PartialReturn.xslt	14 KB	XSL Transform
Reminder.xslt	14 KB	XSL Transform
Return.xslt	13 KB	XSL Transform

Feel free to change these schemas to your own needs (editors are available e.g. from http://www.altova.com/). Choose the schema you need and then click on the button to create a document. To print the document, use the button. To store the current document in the documents for later reference click on the button. An example for a document is shown below.



2005

ID: 32

Query results: 2003, 2004, 2005, 2006, 2008, 2008, Loan to B. Hein, Loan to Barcelona, Loan to D. Nagel, TransLoan

order by: Transaction

Name ~

Type = loan

Begin =

End =

Comment ~

Notes ~

Number ~

Partner ~

Collection

Transaction:

- Loan to B. Hein
  - 2003
  - 2004
  - 2005
  - 2006

Schema: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\Transaction\Sche

Restrict to collection M-Fungi ☑

Restrict to material specimen ☑

Botanische Staatssammlung München

Menzinger Str. 67 80638 München GERMANY

Phone: 08
FAX: 08
E-mail: triebel@

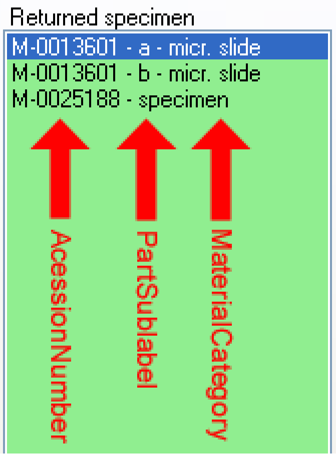
Botanische Staatssammlung München, Menzinger Str. 67
80638 München GERMANY

Dr. Burghard Hein
Botan. Garten u. Botan. Museum Berlin-Dahlem
Freie Universität Berlin
Königin-Luise-Straße 6-8

D - 14191 Berlin

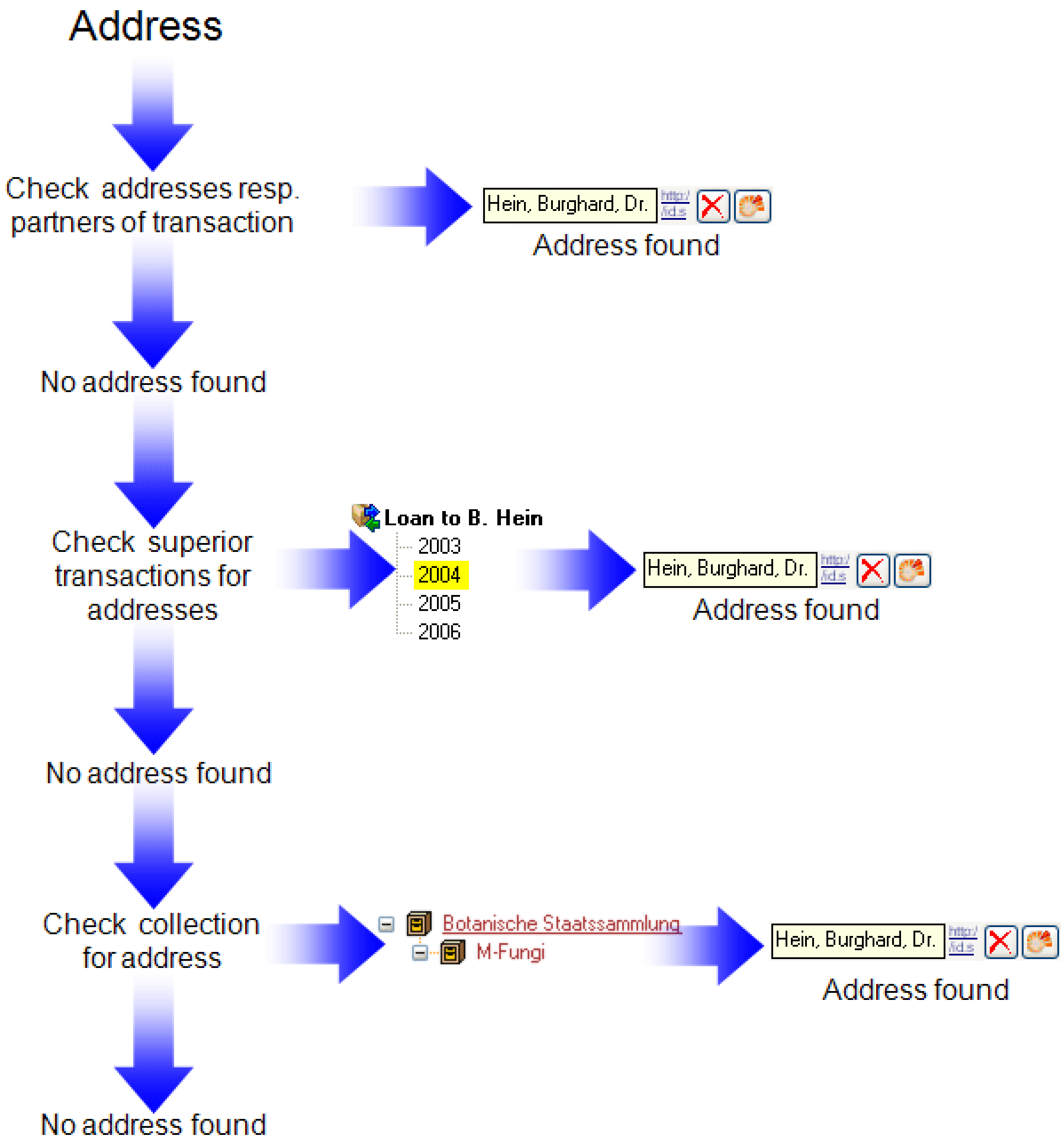
M-0013578 - specimen
M-0013578 - specimen
M-0013577 - specimen
M-0013577 - specimen

The specimens will be listed with their accession number, a optional label of the part and the material category to ensure discrimination in case a specimen contains more then one part (see image below).


Returned specimen

M-0013601 - a - micr. slide
M-0013601 - b - micr. slide
M-0025188 - specimen

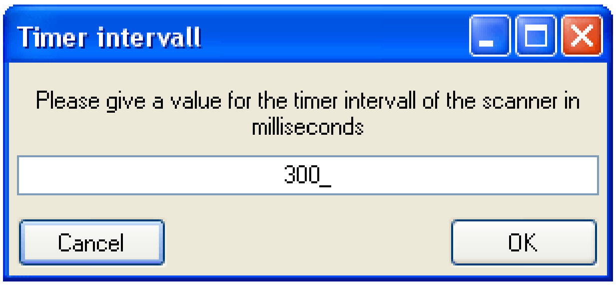
If a transaction entry has no address, resp. a transaction partner linked to an entry in the module DiversityAgents, where addresses are stored, the program will try to find an address in one of the superior transactions from the transaction partners found there. If no address exists in these transactions, the program will try to get an address from the collections. Therefore a transaction partner linked to DiversityAgents is only necessary if either there are no addresses for the collections or you want to use a different address. The search path as described is summarized in the image below.


Address
Check addresses resp. partners of transaction
Hein, Burghard, Dr.
http://ids
Address found
No address found
Check superior transactions for addresses
Loan to B. Hein
2003
2004
2005
2006
Hein, Burghard, Dr.
http://ids
Address found
No address found
Check collection for address
Botanische Staatssammlung
M-Fungi
Hein, Burghard, Dr.
http://ids
Address found
No address found

Transactions - Sending

In the sending tab page of the transaction window you can create the covering note for a sent sample. To choose a schema click on the button and select a schema from the list. DiversityCollection contains several ready to use schemas in the folder **Transaction - Schemas**.

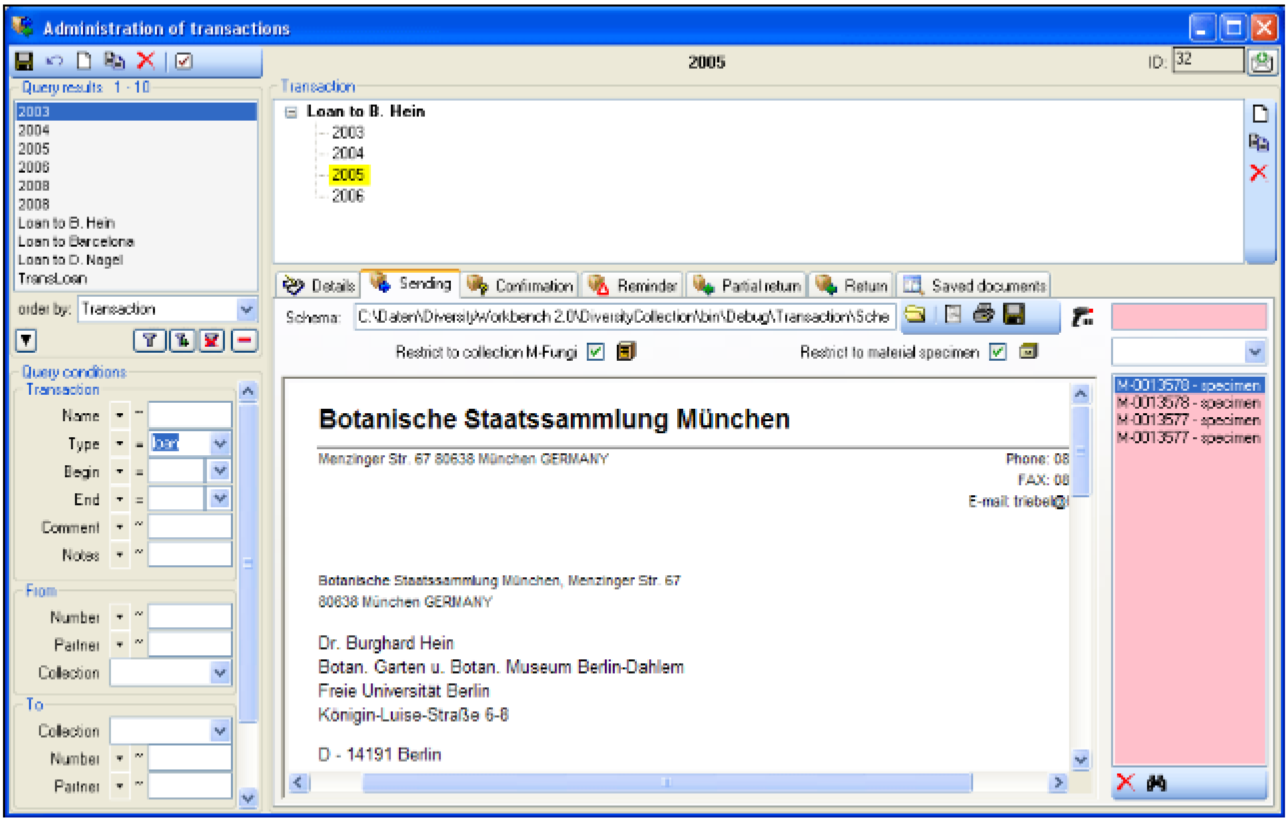
To add a specimen to the list, you can either use the combobox or a barcode scanner. In case you scanner is reading only parts of the barcode try to adjust the timer intervall - click on the button to open a window as shown below.



Please give a value for the timer intervall of the scanner in milliseconds

300_

To restrict the selection of the specimens and parts of the specimens, you can check the **Restrict to collection** ... and **Restrict to material** ... options. To remove a specimen from the list, use the ✕button under the specimen list. If you want to see the details of a specimen, choose it in the list and click on the button. Click on the button to create the document as shown below.



2005

ID: 32

order by: Transaction

Type = loan

Schema: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\Transaction\Sche

Restrict to collection M-Fungi ☑

Restrict to material specimen ☑

Botanische Staatssammlung München

Menzinger Str. 67 80638 München GERMANY

Phone: 08
FAX: 08
E-mail: triebel@

Botanische Staatssammlung München, Menzinger Str. 67
80638 München GERMANY

Dr. Burghard Hein
Botan. Garten u. Botan. Museum Berlin-Dahlem
Freie Universität Berlin
Königin-Luise-Straße 6-8

D - 14191 Berlin

Transactions - Confirmation

On this page you can create an inquiry letter for a package sent, e.g. if a parcel was sent to a loan taker and no confirmation that the parcel reached its destination was returned so far.

With the button, choose the schema you need. Click on the button to create a document. To print the document, use the button. To store the current document in the documents for later reference click on the button.

Schema: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\Transaction\Schemas\Confirmation.xslt

Botanische Staatssammlung München **M**

Menzinger Str. 67 80638 München GERMANY
Phone: 089 17861 265
FAX: 089 17861 193
E-mail: office@bsm.mwn.de

Botanische Staatssammlung München, Menzinger Str. 67
80638 München GERMANY

Dr. Burghard Hein
Botan. Garten u. Botan. Museum Berlin-Dahlem
Freie Universität Berlin
Königin-Luise-Straße 6-8

D - 14191 Berlin

München, 13. Nov. 2007

The Botanische Staatssammlung München sent you as a loan the herbarium specimen(s) specified in the list attached.

- M-0013570 - specimen
- M-0013571 - specimen
- M-0013572 - specimen
- M-0013573 - specimen
- M-0013574 - specimen
- M-0013575 - specimen
- M-0013576 - specimen

Transactions - Reminder

If a loan is due to return resp. a loan taker did not meet the deadline, you can create a prompt note here.

With the button, choose the schema you need. Click on the button to create a document. To print the document, use the button. To store the current document in the documents for later reference click on the button.

The at the upper right the missing specimen and at the lower right the returned specimen are listed.

Schema: C:\Daten\DiversityWorkbench 2.0\Release\DiversityCollection\Transaction\Schemas\Reminder.xslt

Botanische Staatssammlung München **M**

Menzinger Str. 67 80638 München GERMANY

Phone: 089 17861 265
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Botanische Staatssammlung München, Menzinger Str. 67
80638 München GERMANY

Dr. Burghard Hein
Botan. Garten u. Botan. Museum Berlin-Dahlem
Freie Universität Berlin
Königin-Luise-Straße 6-8

D - 14191 Berlin

München, 14. Nov. 2007

The Botanische Staatssammlung München is acknowledging herewith the return (complete return) of the herbarium specimen(s) (7 fungi) sent on loan to your institution. The specimens arrived in good order.

Number of specimens returned:

1 as a total

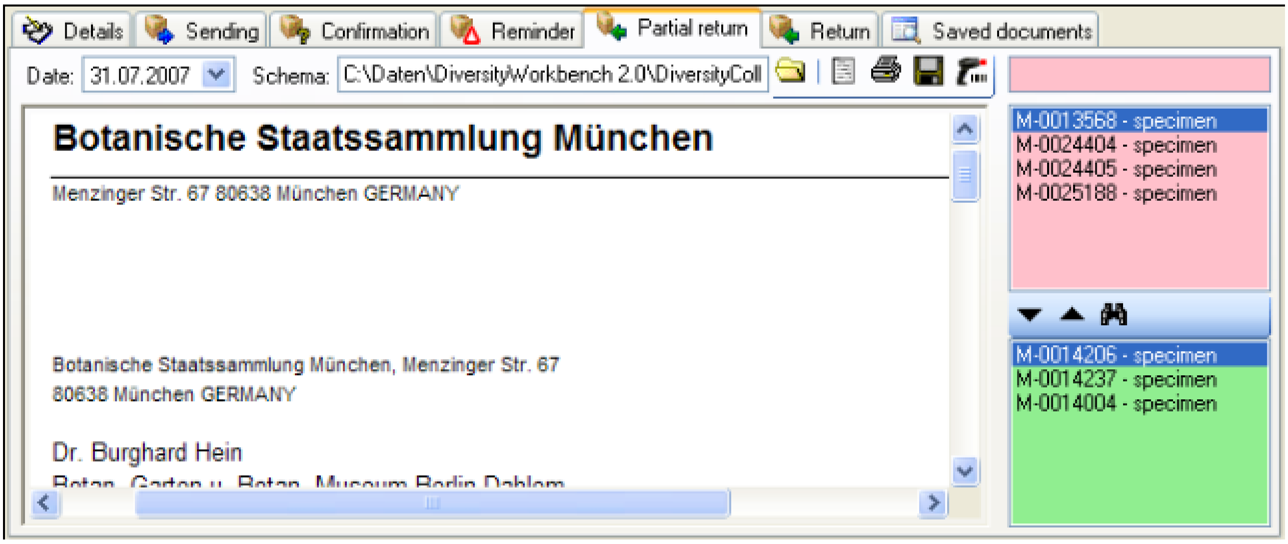
Specimen on loan
M-0013571 - specimen
M-0013572 - specimen
M-0013573 - specimen
M-0013574 - specimen
M-0013575 - specimen
M-0013576 - specimen

Returned specimen
M-0013570 - specimen

Transactions - Partial Return

If parts of a loan were returned, create a letter of acknowledgment here.

With the 📂button, choose the schema you need. Click on the 📄button to create a document. To print the document, use the 🖨button. To store the current document in the documents for later reference click on the 💾button.



Date: 31.07.2007

Schema: C:\Daten\DiversityWorkbench 2.0\DiversityColl

Botanische Staatssammlung München

Menzinger Str. 67 80638 München GERMANY

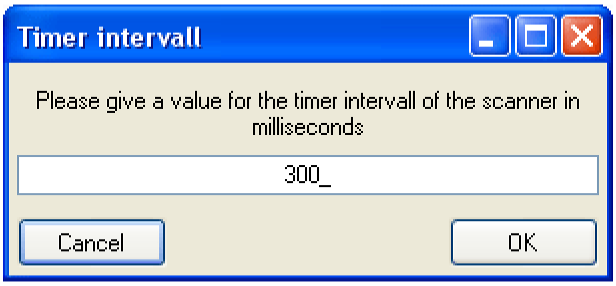
Botanische Staatssammlung München, Menzinger Str. 67
80638 München GERMANY

Dr. Burghard Hein
Botan. Garten u. Botan. Museum Berlin Dahlem

M-0013568 - specimen
M-0024404 - specimen
M-0024405 - specimen
M-0025188 - specimen

M-0014206 - specimen
M-0014237 - specimen
M-0014004 - specimen

You have two option to enter returned specimen. Use the ▲and ▼buttons respectively to move items between the lists or use a barcode scanner - move the mouse cursor into the field for the barcode detection, then scan the barcode. The specimen will be automatically inserted into the list for the returned specimen. In case your scanner is reading only parts of the barcode try to ajust the timer intervall - click on the button to open a window as shown below. Here you can set the interval to a value that is compatible to your scanner. If you want to see the details of a specimen, choose it in the list and click on the 🔍button.

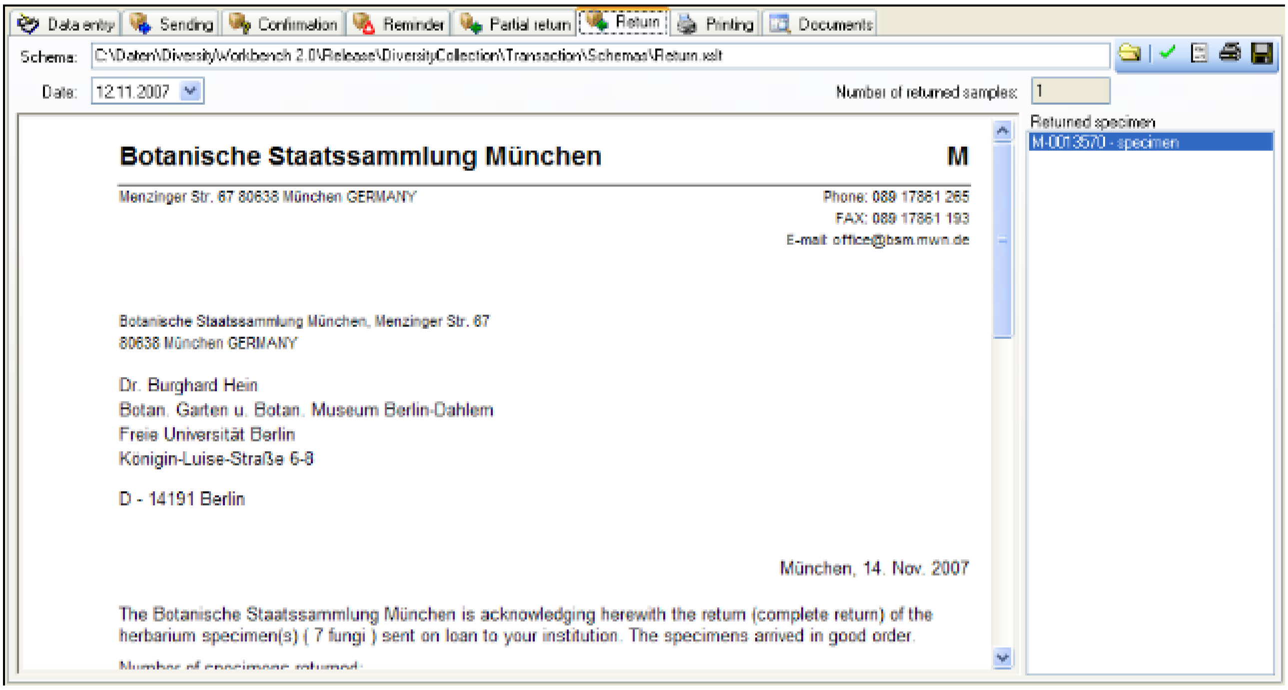


Please give a value for the timer intervall of the scanner in milliseconds

300_

Transactions - Return

If a loan is returned, create a letter of acknowledgment here. With the 📂button, choose the schema you need. If all specimen were returned, click on the ✓ button. This take all remaining specimen into the list of the returned specimens. With the date field you can define a different date as the start if e.g. you starting to register the returned specimen some days before. Click on the 📄button to create a document. To print the document, use the 🖨 button. To store the current document in the documents for later reference click on the 💾 button.



Schema: C:\Daten\DiversityWorkbench 2.0\Release\DiversityCollection\Transaction\Schemas\Return.xslt

Date: 12.11.2007

Number of returned samples: 1

Returned specimen

M-0013570 - specimen

Botanische Staatssammlung München **M**

Menzinger Str. 67 80638 München GERMANY

Phone: 089 17861 265
FAX: 089 17861 193
E-mail: office@bsm.mwn.de

Botanische Staatssammlung München, Menzinger Str. 67
80638 München GERMANY

Dr. Burghard Hein
Botan. Garten u. Botan. Museum Berlin-Dahlem
Freie Universität Berlin
Königin-Luise-Straße 6-8

D - 14191 Berlin

München, 14. Nov. 2007

The Botanische Staatssammlung München is acknowledging herewith the return (complete return) of the herbarium specimen(s) (7 fungi) sent on loan to your institution. The specimens arrived in good order.

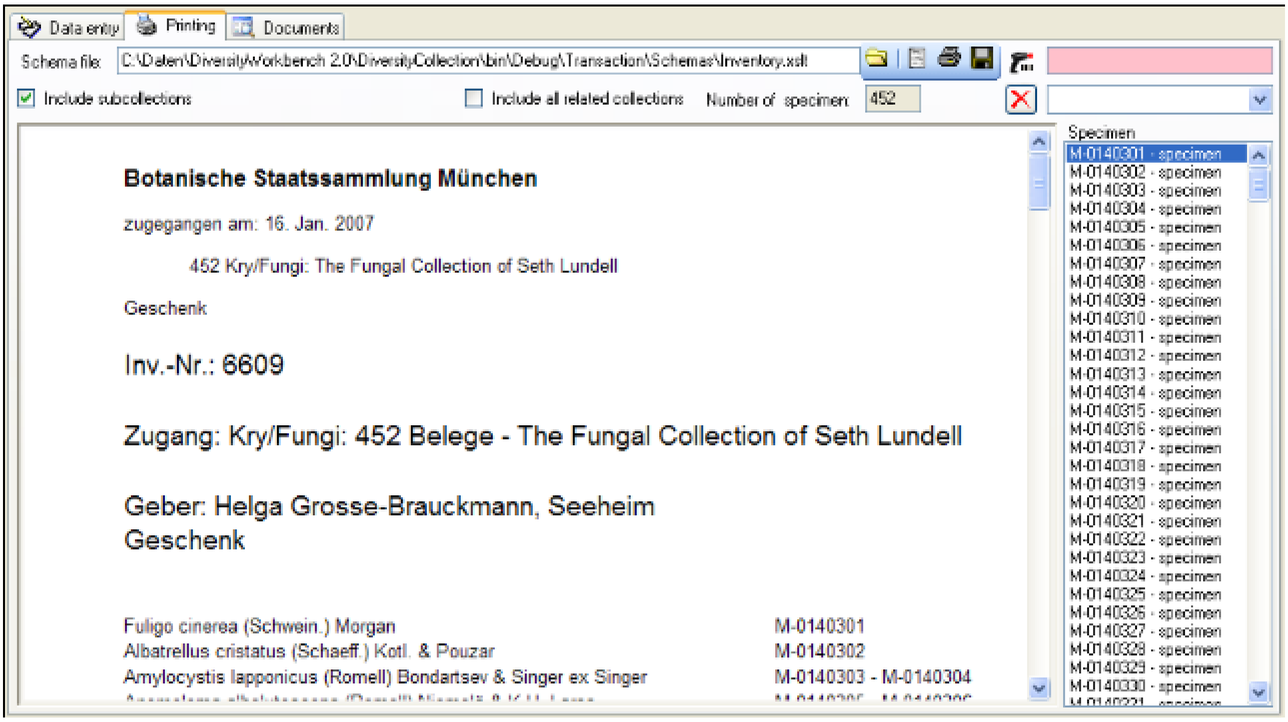
Number of specimens returned:

Transactions - Printing / Inventory

Besides the special pages for creating letters along with a loan this page provides the possibility to print cover letters, inventories and the like. You can restrict the selected specimen to the current collection, include the subcollections or all related collections - just activate the corresponding checkboxes.

To add a specimen to the list, you can either use the combobox or a barcode scanner. To use the barcode scanner, move your mouse cursor into the pink field right from the scanner. In case your scanner is reading only parts of the barcode try to adjust the timer intervall - click on the button to open a window where you can set the timer intervall to a different value. To remove specimen from the list, select it and then click on the ✕ button.

With the button, choose the schema you need. Click on the button to create a preview of the document. To print the document, use the button. To store the current document in the documents for later reference click on the button.



Schema file: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\Transaction\Schemas\Inventory.xslt

☑ Include subcollections

☐ Include all related collections

Number of specimen: 452

Botanische Staatssammlung München

zugegangen am: 16. Jan. 2007

452 Kry/Fungi: The Fungal Collection of Seth Lundell

Geschenk

Inv.-Nr.: 6609

Zugang: Kry/Fungi: 452 Belege - The Fungal Collection of Seth Lundell

Geber: Helga Grosse-Brauckmann, Seeheim
Geschenk

Fuligo cinerea (Schwein.) Morgan	M-0140301
Albatrellus cristatus (Schaeff.) Kotl. & Pouzar	M-0140302
Amylocystis lapponicus (Romell) Bondartsev & Singer ex Singer	M-0140303 - M-0140304

Specimen

M-0140301 - specimen
M-0140302 - specimen
M-0140303 - specimen
M-0140304 - specimen
M-0140305 - specimen
M-0140306 - specimen
M-0140307 - specimen
M-0140308 - specimen
M-0140309 - specimen
M-0140310 - specimen
M-0140311 - specimen
M-0140312 - specimen
M-0140313 - specimen
M-0140314 - specimen
M-0140315 - specimen
M-0140316 - specimen
M-0140317 - specimen
M-0140318 - specimen
M-0140319 - specimen
M-0140320 - specimen
M-0140321 - specimen
M-0140322 - specimen
M-0140323 - specimen
M-0140324 - specimen
M-0140325 - specimen
M-0140326 - specimen
M-0140327 - specimen
M-0140328 - specimen
M-0140329 - specimen
M-0140330 - specimen

Transactions - Documents

This page stores all the documents created or received along with a transaction.

Botanische Staatssammlung München

zugegangen am: 16. Jan. 2007

452 Kry/Fungi: The Fungal Collection of Seth Lundell

Geschenk

Inv.-Nr.: 6609

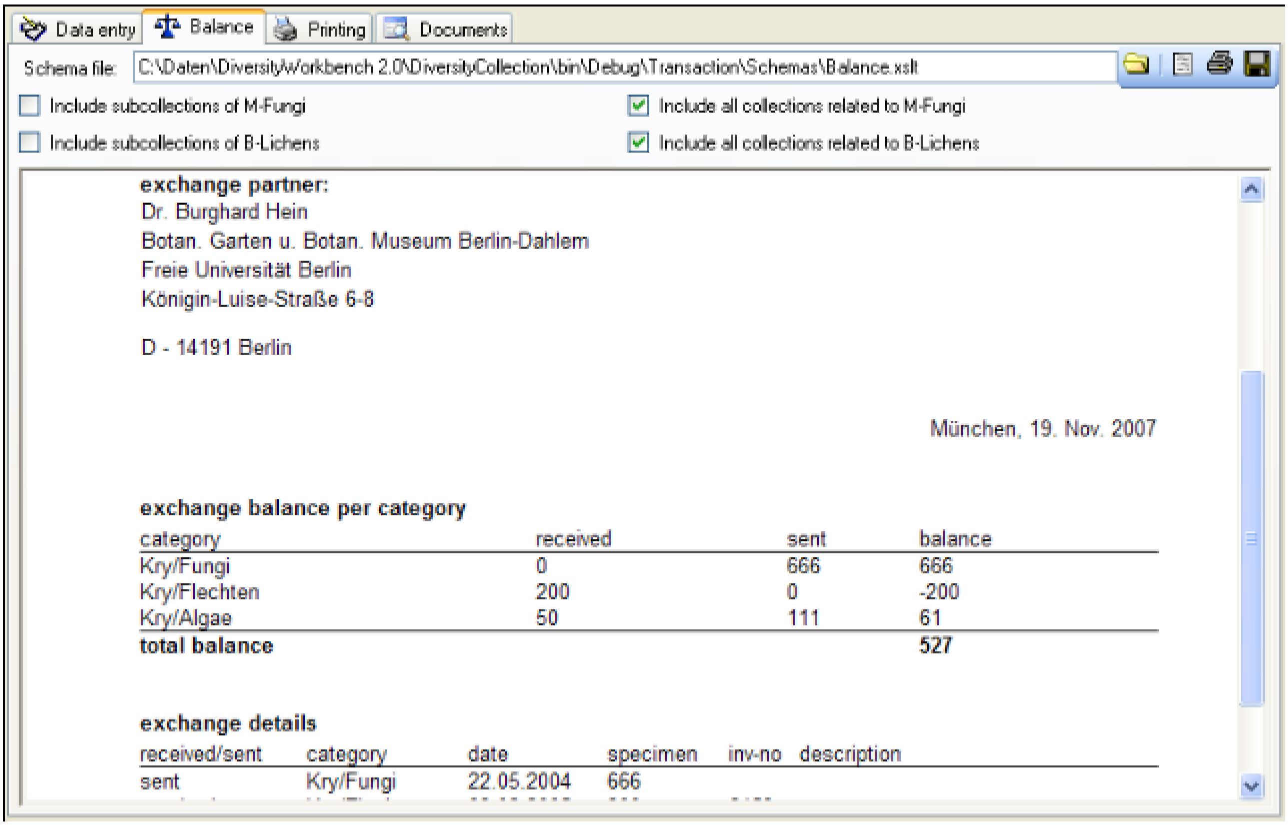
Zugang: Kry/Fungi: 452 Belege - The Fungal Collection of Seth Lundell

To add a document, scan the document and create a screeshot of this document, then create a new entry (click on the button) and insert the screenshot with the Add image from document button. In the lower part you can enter any text related to the document.

Transactions - Balance

The balance for the exchange between two collections.

With the button, choose the schema you need. Click on the button to create a document. To print the document, use the button. To store the current document in the documents for later reference click on the button. To include either the subcollections of any related collections to the collections of the current transaction select the corresponding checkboxes.



Schema file: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\Transaction\Schemas\Balance.xslt

☐ Include subcollections of M-Fungi

☑ Include all collections related to M-Fungi

☐ Include subcollections of B-Lichens

☑ Include all collections related to B-Lichens

exchange partner:
Dr. Burghard Hein
Botan. Garten u. Botan. Museum Berlin-Dahlem
Freie Universität Berlin
Königin-Luise-Straße 6-8

D - 14191 Berlin

München, 19. Nov. 2007

exchange balance per category

category	received	sent	balance
Kry/Fungi	0	666	666
Kry/Flechten	200	0	-200
Kry/Algae	50	111	61
total balance			**527**

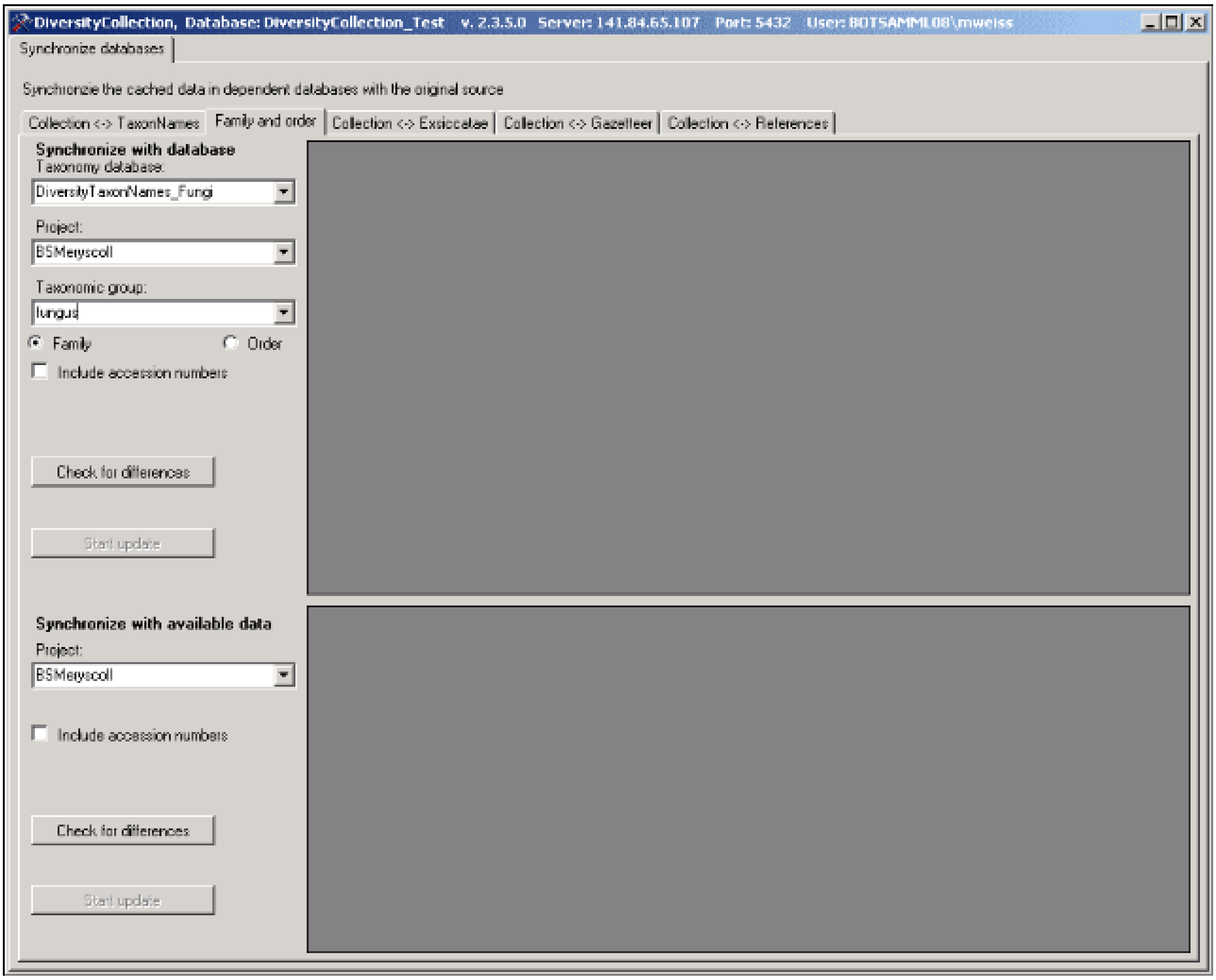
exchange details

received/sent	category	date	specimen	inv-no	description
sent	Kry/Fungi	22.05.2004	666		

Maintenance

DiversityCollection can be linked with several other modules of the Diversity Workbench. If you link a data source to another module, the URI of the dataset in the other module together with several cached values will be stored in DiversityCollection. Along with changes in the other modules these cached values may differ from the original values. To get the actual values you can use the maintenance function within DiversityCollection.

Choose **Administration -> Maintenance ...** from the menu. A window as shown below will open. To transfer the higher taxonomic entries choose the tab Family and order. The upper part will synchronize the entries with taxonomic databases like DiversityTaxonNames_Fungi. Select a taxonomic database, a project and a taxonomic group, then choose if you want to synchronize the family or the order. If you want to take a look at the single datasets you have to select the "Include accession number" checkbox. Than start the query with a click on the Check for differences button.


DiversityCollection, Database: DiversityCollection_Test v. 2.3.5.0 Server: 141.84.65.107 Port: 5432 User: BOTSAMML08\mweiss

Synchronzie the cached data in dependent databases with the original source

Synchronize with database

Taxonomy database: DiversityTaxonNames_Fungi

Project: BSMeryscoll

Taxonomic group: fungus

● Family ○ Order

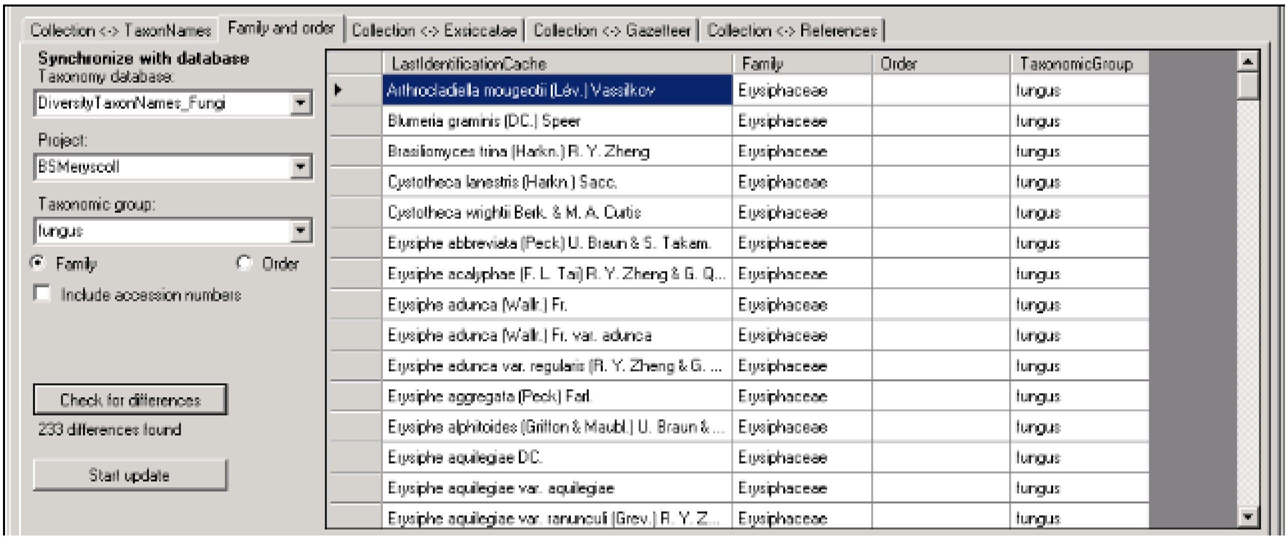
☐ Include accession numbers

Synchronize with available data

Project: BSMeryscoll

☐ Include accession numbers

The form will list all differences found as shown below. To update the database click on the Start update button.



Synchronize with database

Taxonomy database: DiversityTaxonNames_Fungi

Project: BSMeryscoll

Taxonomic group: fungus

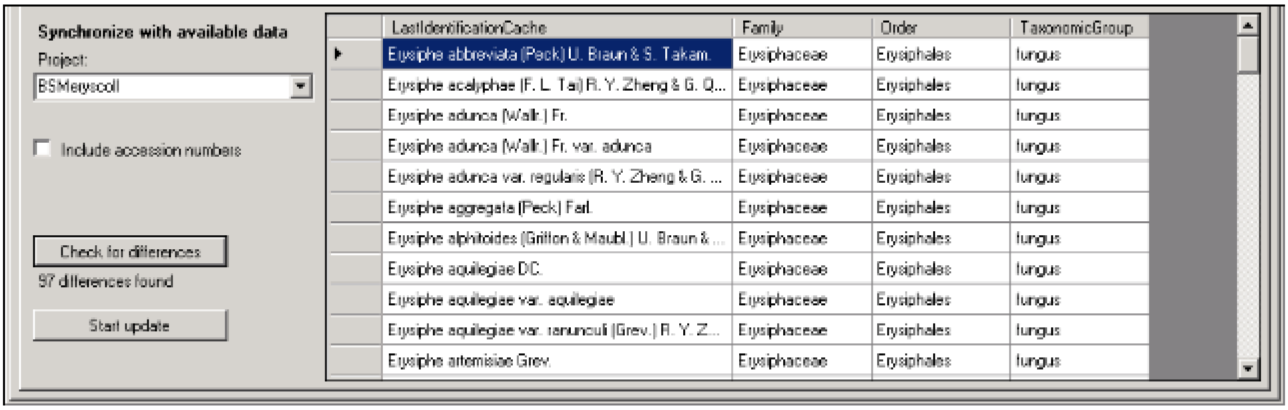
● Family ○ Order

☐ Include accession numbers

233 differences found

	LastIdentificationCache	Family	Order	TaxonomicGroup
▸	Arthrocladiella mougeotii (Lév.) Vassilkov	Erysiphaceae		fungus
	Blumeria graminis (DC.) Speer	Erysiphaceae		fungus
	Brasiliomyces trina (Harkn.) R. Y. Zheng	Erysiphaceae		fungus
	Cystotheca lanestris (Harkn.) Sacc.	Erysiphaceae		fungus
	Cystotheca wrightii Berk. & M. A. Curtis	Erysiphaceae		fungus
	Erysiphe abbreviata (Peck) U. Braun & S. Takam.	Erysiphaceae		fungus
	Erysiphe acalyphae (F. L. Tai) R. Y. Zheng & G. Q...	Erysiphaceae		fungus
	Erysiphe adunca (Walr.) Fr.	Erysiphaceae		fungus
	Erysiphe adunca (Walr.) Fr. var. adunca	Erysiphaceae		fungus
	Erysiphe adunca var. regularis (R. Y. Zheng & G. ...	Erysiphaceae		fungus
	Erysiphe aggregata (Peck) Farl.	Erysiphaceae		fungus
	Erysiphe alphitoides (Griffon & Maubl.) U. Braun & ...	Erysiphaceae		fungus
	Erysiphe aquilegiae DC.	Erysiphaceae		fungus
	Erysiphe aquilegiae var. aquilegiae	Erysiphaceae		fungus
	Erysiphe aquilegiae var. ranunculi (Grev.) R. Y. Z...	Erysiphaceae		fungus

In the lower part you can synchronize your entries within the database. Choose a project and click on the Check for differences button to start the query. To import the higher taxa to the dataset click on the Start update button.



Synchronize with available data

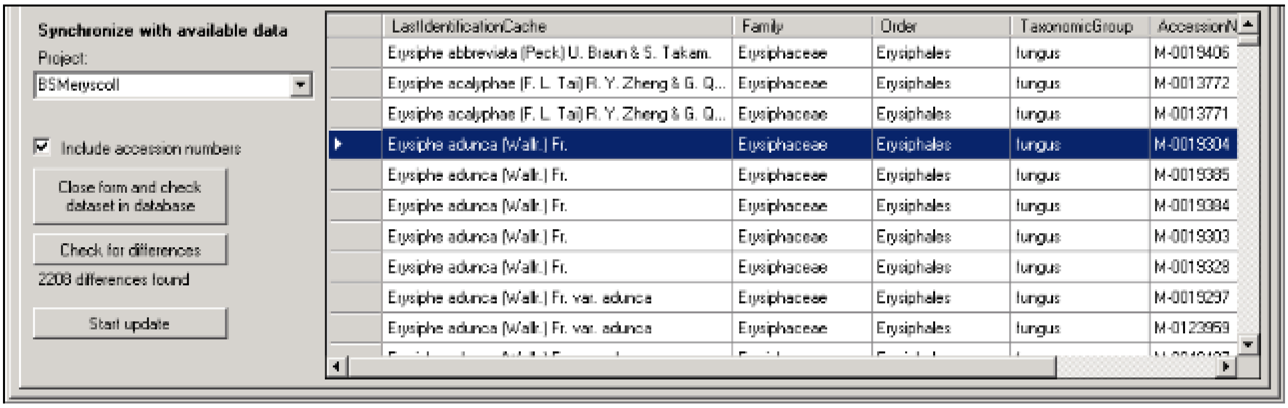
Project: BSMeryscoll

☐ Include accession numbers

97 differences found

	LastIdentificationCache	Family	Order	TaxonomicGroup
▸	Erysiphe abbreviata (Peck) U. Braun & S. Takam.	Erysiphaceae	Erysiphales	fungus
	Erysiphe acalyphae (F. L. Tai) R. Y. Zheng & G. Q...	Erysiphaceae	Erysiphales	fungus
	Erysiphe adunca (Walr.) Fr.	Erysiphaceae	Erysiphales	fungus
	Erysiphe adunca (Walr.) Fr. var. adunca	Erysiphaceae	Erysiphales	fungus
	Erysiphe adunca var. regularis (R. Y. Zheng & G. ...	Erysiphaceae	Erysiphales	fungus
	Erysiphe aggregata (Peck) Farl.	Erysiphaceae	Erysiphales	fungus
	Erysiphe alphitoides (Griffon & Maubl.) U. Braun & ...	Erysiphaceae	Erysiphales	fungus
	Erysiphe aquilegiae DC.	Erysiphaceae	Erysiphales	fungus
	Erysiphe aquilegiae var. aquilegiae	Erysiphaceae	Erysiphales	fungus
	Erysiphe aquilegiae var. ranunculi (Grev.) R. Y. Z...	Erysiphaceae	Erysiphales	fungus
	Erysiphe artemisiae Grev.	Erysiphaceae	Erysiphales	fungus

If you want to have a more detailed look on your data you have to check the "Include accession number" checkbox before starting the query. A button Close form and check dataset in database will appear that will take you back to a single dataset in the database.



Synchronize with available data

Project: BSMeryscoll

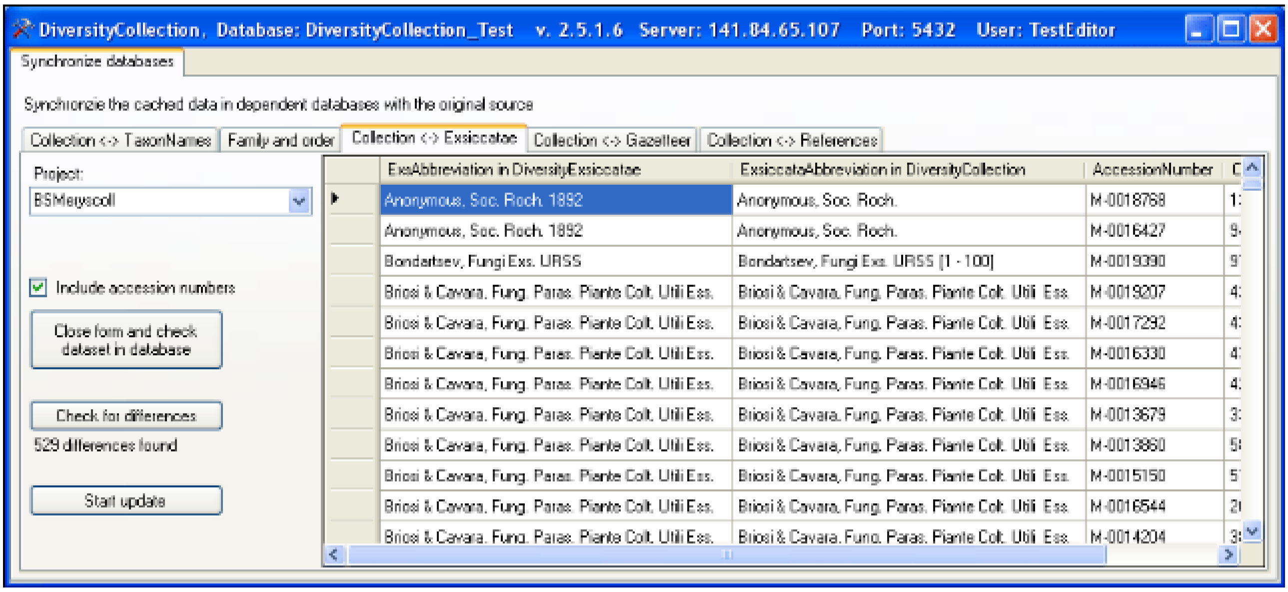
☑ Include accession numbers

2208 differences found

	LastIdentificationCache	Family	Order	TaxonomicGroup	AccessionN
	Erysiphe abbreviata (Peck) U. Braun & S. Takam.	Erysiphaceae	Erysiphales	fungus	M-0019406
	Erysiphe acalyphae (F. L. Tai) R. Y. Zheng & G. Q...	Erysiphaceae	Erysiphales	fungus	M-0013772
	Erysiphe acalyphae (F. L. Tai) R. Y. Zheng & G. Q...	Erysiphaceae	Erysiphales	fungus	M-0013771
▸	Erysiphe adunca (Walr.) Fr.	Erysiphaceae	Erysiphales	fungus	M-0019304
	Erysiphe adunca (Walr.) Fr.	Erysiphaceae	Erysiphales	fungus	M-0019385
	Erysiphe adunca (Walr.) Fr.	Erysiphaceae	Erysiphales	fungus	M-0019384
	Erysiphe adunca (Walr.) Fr.	Erysiphaceae	Erysiphales	fungus	M-0019303
	Erysiphe adunca (Walr.) Fr.	Erysiphaceae	Erysiphales	fungus	M-0019328
	Erysiphe adunca (Walr.) Fr. var. adunca	Erysiphaceae	Erysiphales	fungus	M-0019297
	Erysiphe adunca (Walr.) Fr. var. adunca	Erysiphaceae	Erysiphales	fungus	M-0123959

Maintenance - Exsiccatae

To synchronize the abbreviations of the titles of the exsiccatal series that are linked to the module DiversityExsiccatae choose **Administration -> Maintenance...** from the menu. A window as shown below will open. On the tab page **Collection <-> Exsiccatae** select the project for which the titles should be synchronized. The title is stored in the field ExsiccataAbbreviation in the table CollectionSpecimen. Select the project that should be synchronized. Then start the query with a click on the Check for differences button.



Synchronzie the cached data in dependent databases with the original source

Project: BSMeyscoll

☑ Include accession numbers

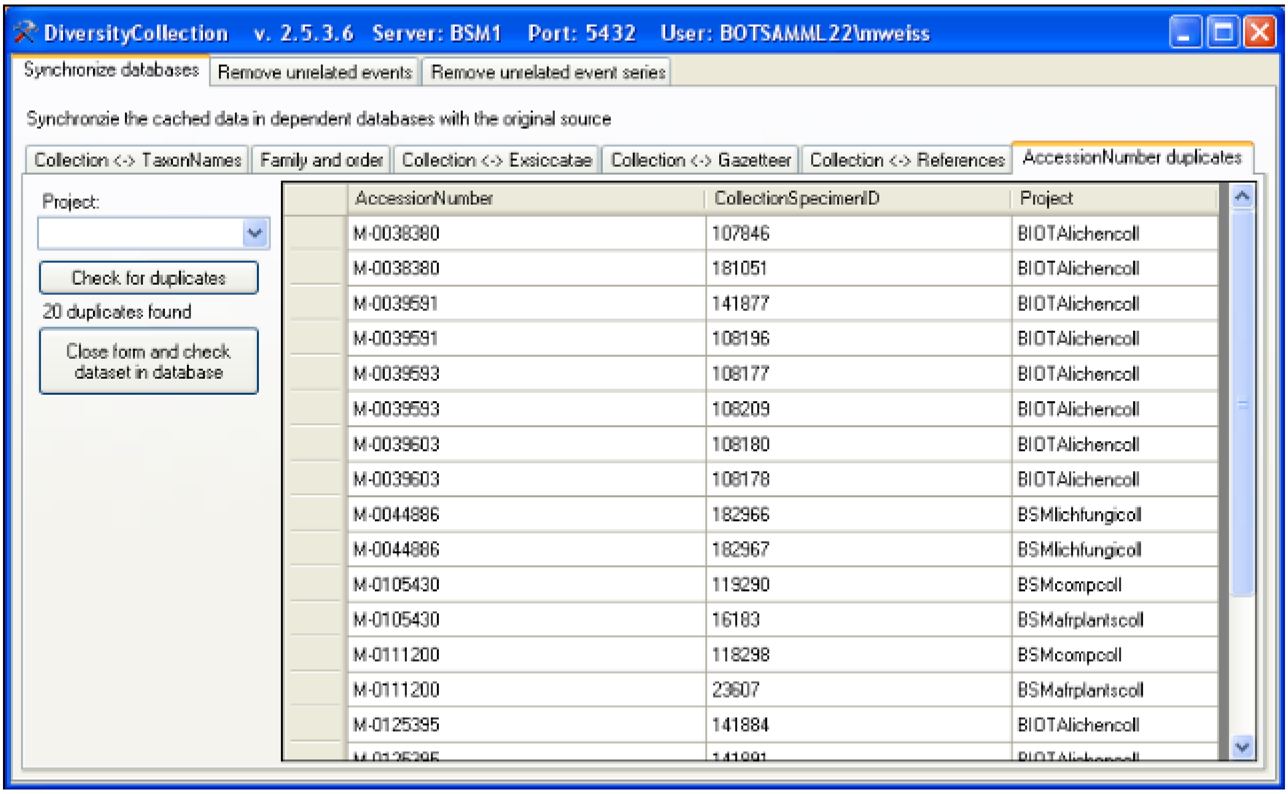
529 differences found

ExsAbbreviation in DiversityExsiccatae	ExsiccataAbbreviation in DiversityCollection	AccessionNumber
Anonymous, Soc. Roch. 1892	Anonymous, Soc. Roch.	M-0018768
Anonymous, Soc. Roch. 1892	Anonymous, Soc. Roch.	M-0016427
Bondartsev, Fungi Exs. URSS	Bondartsev, Fungi Exs. URSS [1 - 100]	M-0019390
Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	M-0019207
Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	M-0017292
Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	M-0016330
Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	M-0016946
Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	M-0013679
Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	M-0013860
Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	M-0015150
Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	M-0016544
Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	Briosi & Cavara, Fung. Paras. Piante Colt. Utili Ess.	M-0014204

The form will list all differences found. To update the database click on the Start update button. If you want to have a more detailed look at your data you have to check the "Include accession number" checkbox before starting the query. A button Close form and check dataset in database will appear that will take you back to a single dataset in the database.

Maintenance - Accession number duplicates

The database will not prevent you from entering an accession number several times e.g. via an import. To check for duplicate accession numbers choose **Administration -> Maintenance** from the menu. A window as shown below will open. On the tab page **AccessionNumber duplicates** . You can restrict the query to a project. To start the query with a click on the **Check for duplictes** button.



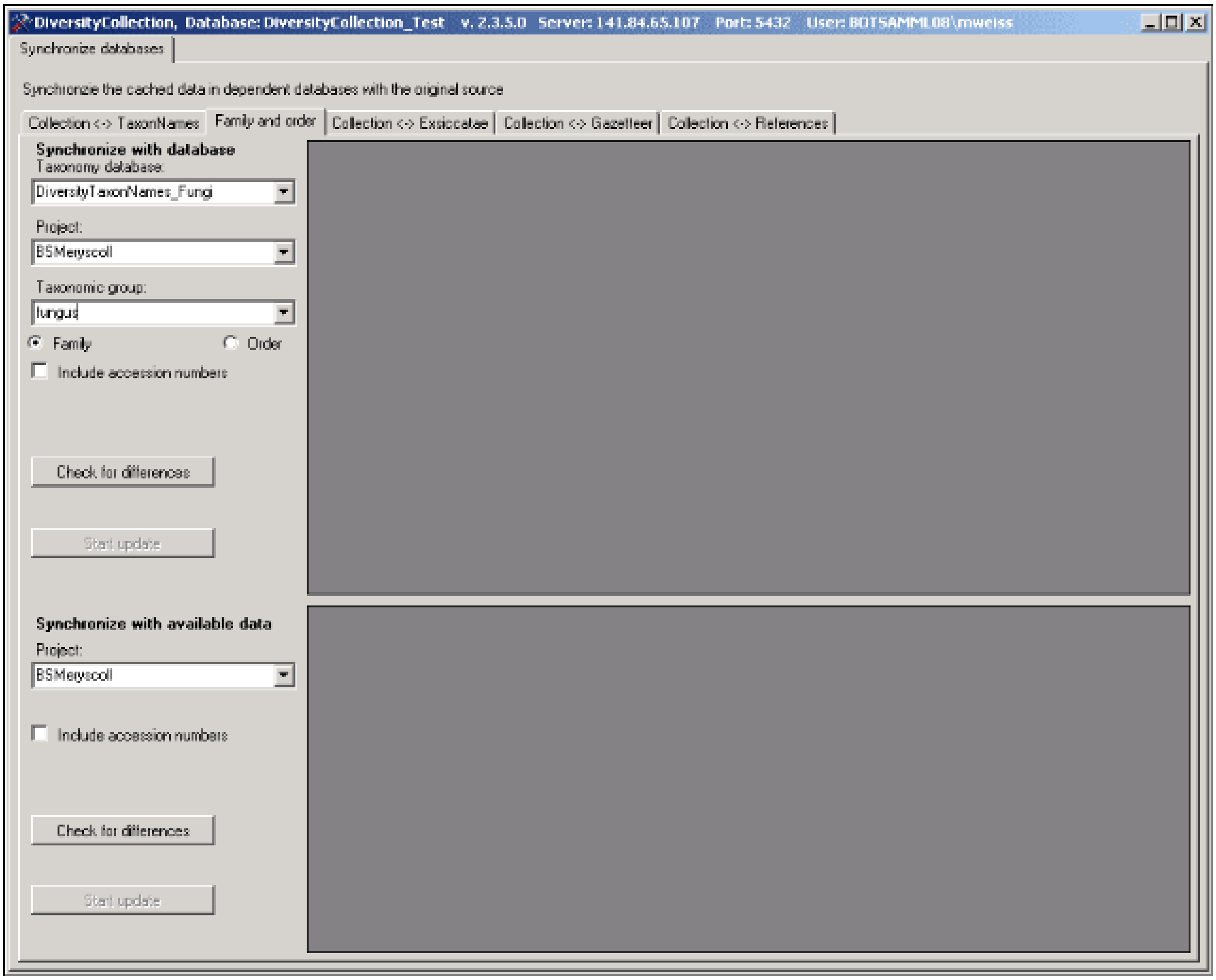
AccessionNumber	CollectionSpecimenID	Project
M-0038380	107846	BIOTAlichencoll
M-0038380	181051	BIOTAlichencoll
M-0039591	141877	BIOTAlichencoll
M-0039591	108196	BIOTAlichencoll
M-0039593	108177	BIOTAlichencoll
M-0039593	108209	BIOTAlichencoll
M-0039603	108180	BIOTAlichencoll
M-0039603	108178	BIOTAlichencoll
M-0044886	182966	BSMlichfungicoll
M-0044886	182967	BSMlichfungicoll
M-0105430	119290	BSMcompcoll
M-0105430	16183	BSMafrplantscoll
M-0111200	118298	BSMcompcoll
M-0111200	23607	BSMafrplantscoll
M-0125395	141884	BIOTAlichencoll

The form will list all duplicates found as shown above. To switch to a dataset in the database, select it in the table and click on the Close form and check dataset in database button.

Maintenance - Family and Order

To synchronize the entries for the family and order of taxa derived from the module DiversityTaxonNames choose **Administration -> Maintenance** from the menu. A window as shown below will open. To synchronize the higher taxonomic entries for entries linked to the module DiversityTaxonNames choose the tab **Family and order**. These are stored in the fields FamilyCache and OrderCache in the table IdentificationUnit .

In the upper part you can synchronize your data with the entries in taxonomic databases like DiversityTaxonNames_Fungi. Select a taxonomic database, a project and a taxonomic group, then choose whether you want to synchronize the family or the order. If you want to inspect single datasets you have to check the **Include accession number** checkbox. Then click on the Check for differences button to start the query.



DiversityCollection, Database: DiversityCollection_Test v. 2.3.5.0 Server: 141.84.65.107 Port: 5432 User: BOTSAMML08\mweiss

Synchronzie the cached data in dependent databases with the original source

Synchronize with database

Taxonomy database: DiversityTaxonNames_Fungi

Project: BSMeryscoll

Taxonomic group: fungus

● Family ○ Order

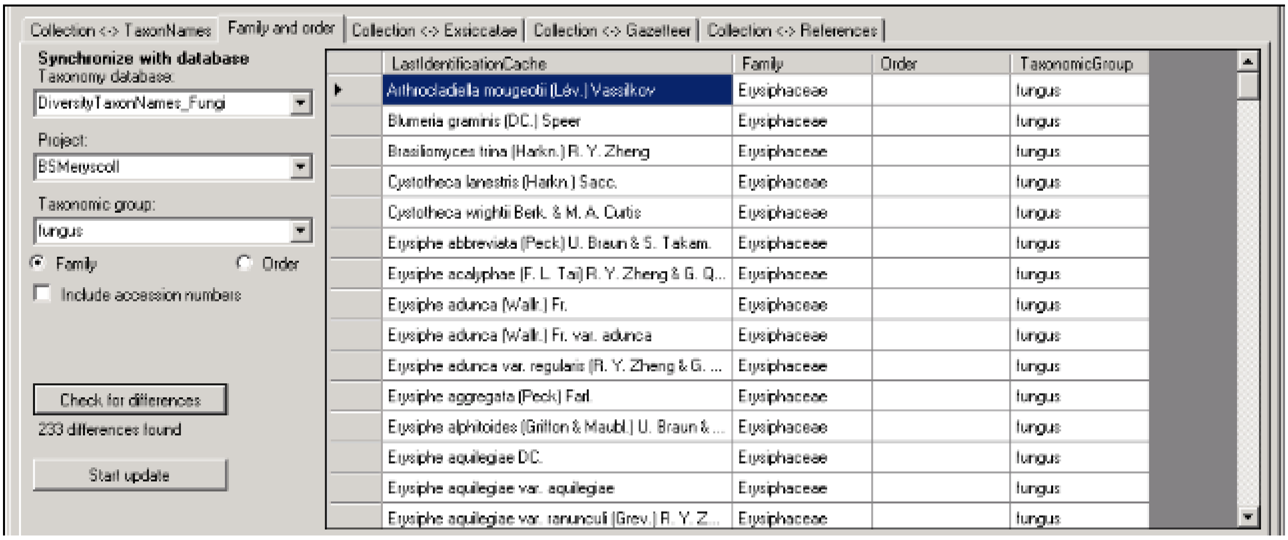
☐ Include accession numbers

Synchronize with available data

Project: BSMeryscoll

☐ Include accession numbers

The form will list all differences found as shown below. To update the database click on the Start update button.



Synchronize with database

Taxonomy database: DiversityTaxonNames_Fungi

Project: BSMeryscoll

Taxonomic group: fungus

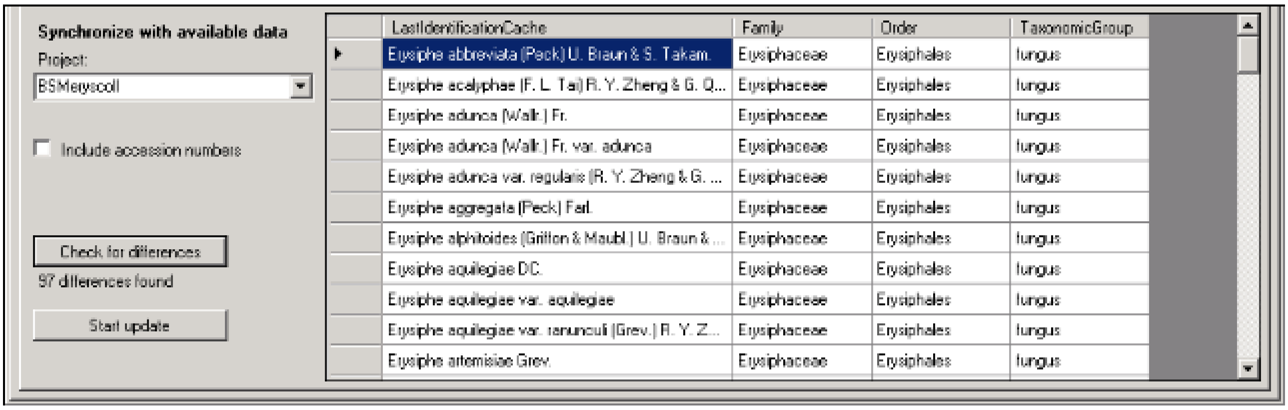
● Family ○ Order

☐ Include accession numbers

233 differences found

LastIdentificationCache	Family	Order	TaxonomicGroup
Arthrocladiella mougeotii (Lév.) Vassilkov	Erysiphaceae		fungus
Blumeria graminis (DC.) Speer	Erysiphaceae		fungus
Brasiliomyces trina (Harkn.) R. Y. Zheng	Erysiphaceae		fungus
Cystotheca lanestris (Harkn.) Sacc.	Erysiphaceae		fungus
Cystotheca wrightii Berk. & M. A. Curtis	Erysiphaceae		fungus
Erysiphe abbreviata (Peck) U. Braun & S. Takam.	Erysiphaceae		fungus
Erysiphe acalyphae (F. L. Tai) R. Y. Zheng & G. Q...	Erysiphaceae		fungus
Erysiphe adunca (Wallr.) Fr.	Erysiphaceae		fungus
Erysiphe adunca (Wallr.) Fr. var. adunca	Erysiphaceae		fungus
Erysiphe adunca var. regularis (R. Y. Zheng & G. ...	Erysiphaceae		fungus
Erysiphe aggregata (Peck) Farl.	Erysiphaceae		fungus
Erysiphe alphitoides (Griffon & Maubl.) U. Braun & ...	Erysiphaceae		fungus
Erysiphe aquilegiae DC.	Erysiphaceae		fungus
Erysiphe aquilegiae var. aquilegiae	Erysiphaceae		fungus
Erysiphe aquilegiae var. ranunculi (Grev.) R. Y. Z...	Erysiphaceae		fungus

In the lower part you can synchronize your entries within the database. Choose a project and click on the Check for differences button to start the query. To import the higher taxa to the dataset click on the Start update button.



Synchronize with available data

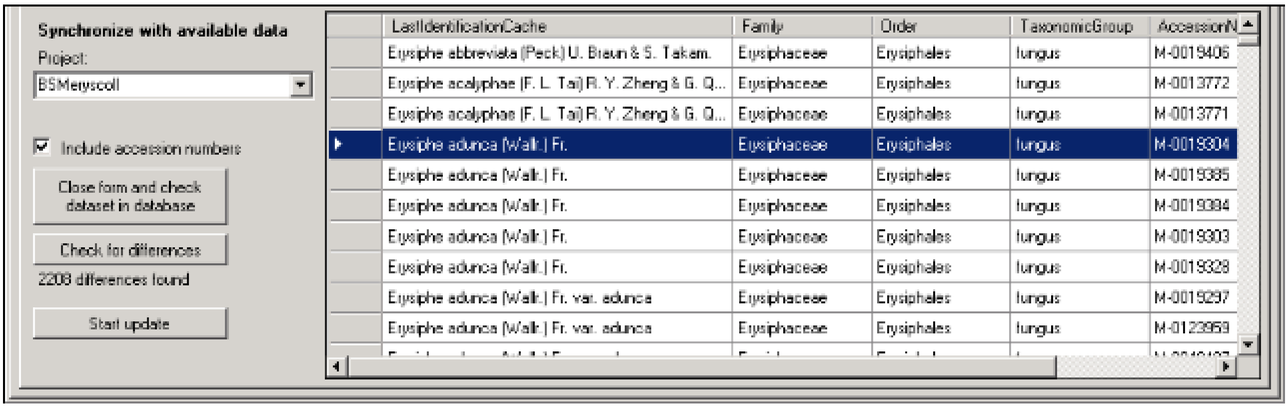
Project: BSMeryscoll

☐ Include accession numbers

97 differences found

LastIdentificationCache	Family	Order	TaxonomicGroup
Erysiphe abbreviata (Peck) U. Braun & S. Takam.	Erysiphaceae	Erysiphales	fungus
Erysiphe acalyphae (F. L. Tai) R. Y. Zheng & G. Q...	Erysiphaceae	Erysiphales	fungus
Erysiphe adunca (Wallr.) Fr.	Erysiphaceae	Erysiphales	fungus
Erysiphe adunca (Wallr.) Fr. var. adunca	Erysiphaceae	Erysiphales	fungus
Erysiphe adunca var. regularis (R. Y. Zheng & G. ...	Erysiphaceae	Erysiphales	fungus
Erysiphe aggregata (Peck) Farl.	Erysiphaceae	Erysiphales	fungus
Erysiphe alphitoides (Griffon & Maubl.) U. Braun & ...	Erysiphaceae	Erysiphales	fungus
Erysiphe aquilegiae DC.	Erysiphaceae	Erysiphales	fungus
Erysiphe aquilegiae var. aquilegiae	Erysiphaceae	Erysiphales	fungus
Erysiphe aquilegiae var. ranunculi (Grev.) R. Y. Z...	Erysiphaceae	Erysiphales	fungus
Erysiphe artemisiae Grev.	Erysiphaceae	Erysiphales	fungus

If you want to have a more detailed look on your data you have to check the **Include accession number** checkbox before starting the query. A button Close form and check dataset in database will appear that will take you back to a single dataset in the database.



Synchronize with available data

Project: BSMeryscoll

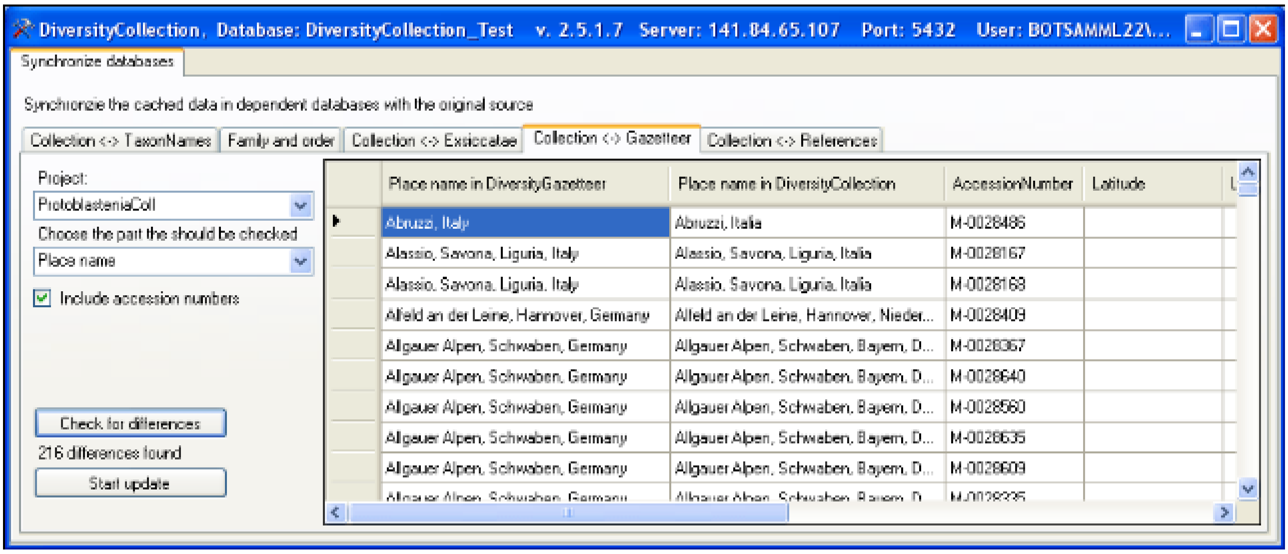
☑ Include accession numbers

2208 differences found

LastIdentificationCache	Family	Order	TaxonomicGroup	AccessionN
Erysiphe abbreviata (Peck) U. Braun & S. Takam.	Erysiphaceae	Erysiphales	fungus	M-0019406
Erysiphe acalyphae (F. L. Tai) R. Y. Zheng & G. Q...	Erysiphaceae	Erysiphales	fungus	M-0013772
Erysiphe acalyphae (F. L. Tai) R. Y. Zheng & G. Q...	Erysiphaceae	Erysiphales	fungus	M-0013771
Erysiphe adunca (Wallr.) Fr.	Erysiphaceae	Erysiphales	fungus	M-0019304
Erysiphe adunca (Wallr.) Fr.	Erysiphaceae	Erysiphales	fungus	M-0019385
Erysiphe adunca (Wallr.) Fr.	Erysiphaceae	Erysiphales	fungus	M-0019384
Erysiphe adunca (Wallr.) Fr.	Erysiphaceae	Erysiphales	fungus	M-0019303
Erysiphe adunca (Wallr.) Fr.	Erysiphaceae	Erysiphales	fungus	M-0019328
Erysiphe adunca (Wallr.) Fr. var. adunca	Erysiphaceae	Erysiphales	fungus	M-0019297
Erysiphe adunca (Wallr.) Fr. var. adunca	Erysiphaceae	Erysiphales	fungus	M-0123959

Maintenance - Gazetteer

To synchronize the entries derived from the module DiversityGazetteer choose **Administration -> Maintenance** from the menu. A window as shown below will open. On the tab page **Collection <-> Gazetteer** select the project for which the entries should be synchronized. There are 3 targets for the synchronization: Place name in the field Location1 in table CollectionEventLocalisation, Country stored in the field CountryCache in the table CollectionEvent and the Coordinates stored in the fields AverageLatitudeCache and AverageLongitudeCache in the table CollectionEventLocalisation. Select one of there targets for the synchronization. To start the query, click on the Check for differences button.


DiversityCollection, Database: DiversityCollection_Test v. 2.5.1.7 Server: 141.84.65.107 Port: 5432 User: BOTSAMML22\...

Synchronize databases

Synchronzie the cached data in dependent databases with the original source

Collection <-> TaxonNames | Family and order | Collection <-> Exsiccatae | Collection <-> Gazetteer | Collection <-> References

Project: ProtoblasteniaColl

Choose the part the should be checked: Place name

☑ Include accession numbers

Check for differences

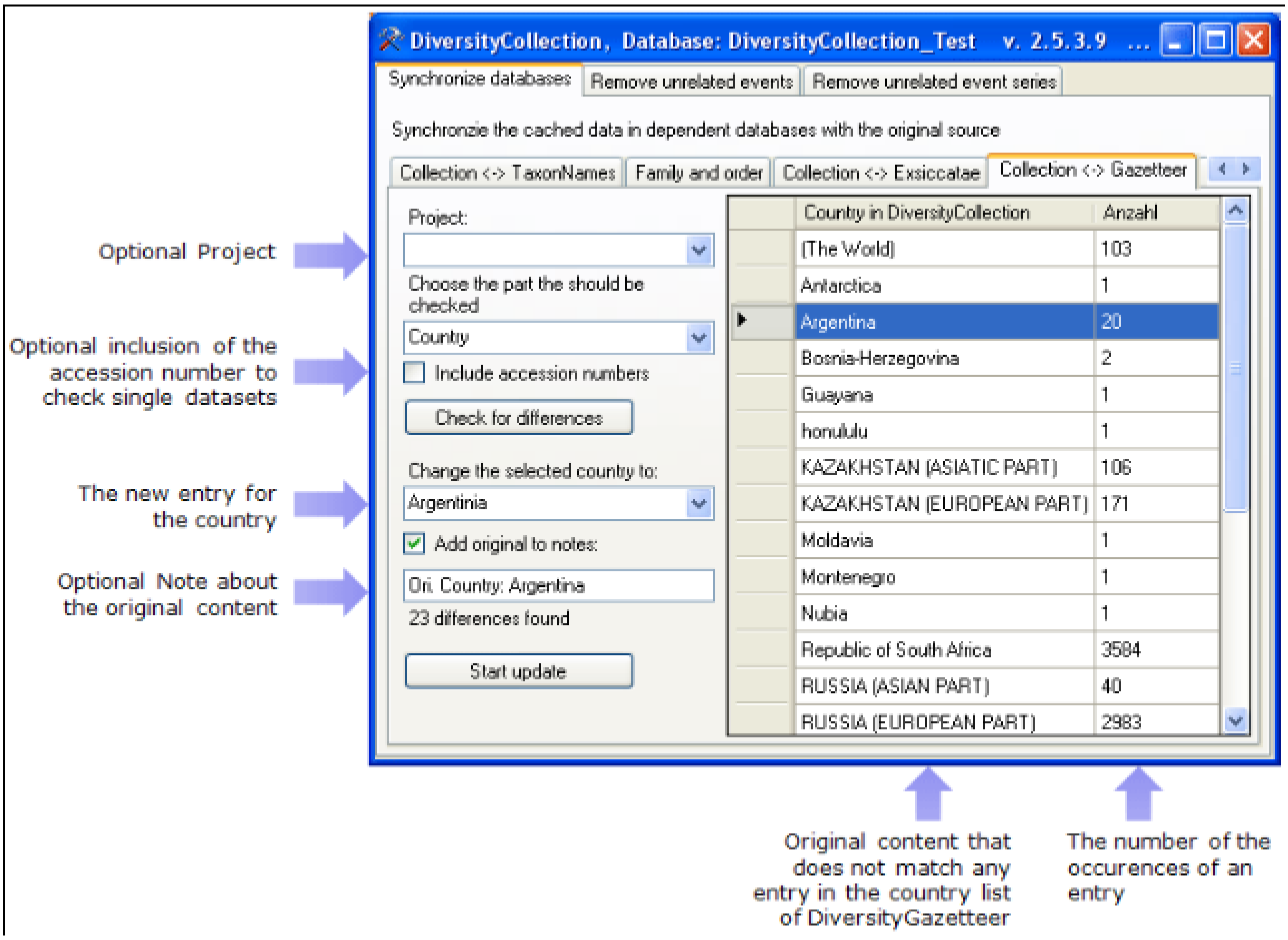
216 differences found

Start update

Place name in DiversityGazetteer	Place name in DiversityCollection	AccessionNumber	Latitude
Abruzzi, Italy	Abruzzi, Italia	M-0028486	
Alassio, Savona, Liguria, Italy	Alassio, Savona, Liguria, Italia	M-0028167	
Alassio, Savona, Liguria, Italy	Alassio, Savona, Liguria, Italia	M-0028168	
Alfeld an der Leine, Hannover, Germany	Alfeld an der Leine, Hannover, Nieder...	M-0028409	
Allgauer Alpen, Schwaben, Germany	Allgauer Alpen, Schwaben, Bayern, D...	M-0028367	
Allgauer Alpen, Schwaben, Germany	Allgauer Alpen, Schwaben, Bayern, D...	M-0028640	
Allgauer Alpen, Schwaben, Germany	Allgauer Alpen, Schwaben, Bayern, D...	M-0028560	
Allgauer Alpen, Schwaben, Germany	Allgauer Alpen, Schwaben, Bayern, D...	M-0028635	
Allgauer Alpen, Schwaben, Germany	Allgauer Alpen, Schwaben, Bayern, D...	M-0028609	

The form will list all differences found. To update the database click on the Start update button. If you want to have a more detailed look on your data, you have to check the **Include accession number** checkbox before starting the query. A button Close form and check dataset in database will appear that will take you back to a single dataset in the database.

To check for countries that do not match entries in DiversityGazetteer choose Country from the list as shown below.



Synchronzie the cached data in dependent databases with the original source

Project:

Choose the part the should be checked: Country

☐ Include accession numbers

Change the selected country to: Argentinia

☑ Add original to notes: Ori. Country: Argentina

23 differences found

Country in DiversityCollection	Anzahl
[The World]	103
Antarctica	1
Argentina	20
Bosnia-Herzegovina	2
Guayana	1
honululu	1
KAZAKHSTAN (ASIATIC PART)	106
KAZAKHSTAN (EUROPEAN PART)	171
Moldavia	1
Montenegro	1
Nubia	1
Republic of South Africa	3584
RUSSIA (ASIAN PART)	40
RUSSIA (EUROPEAN PART)	2983

Optional Project

Optional inclusion of the accession number to check single datasets

The new entry for the country

Optional Note about the original content

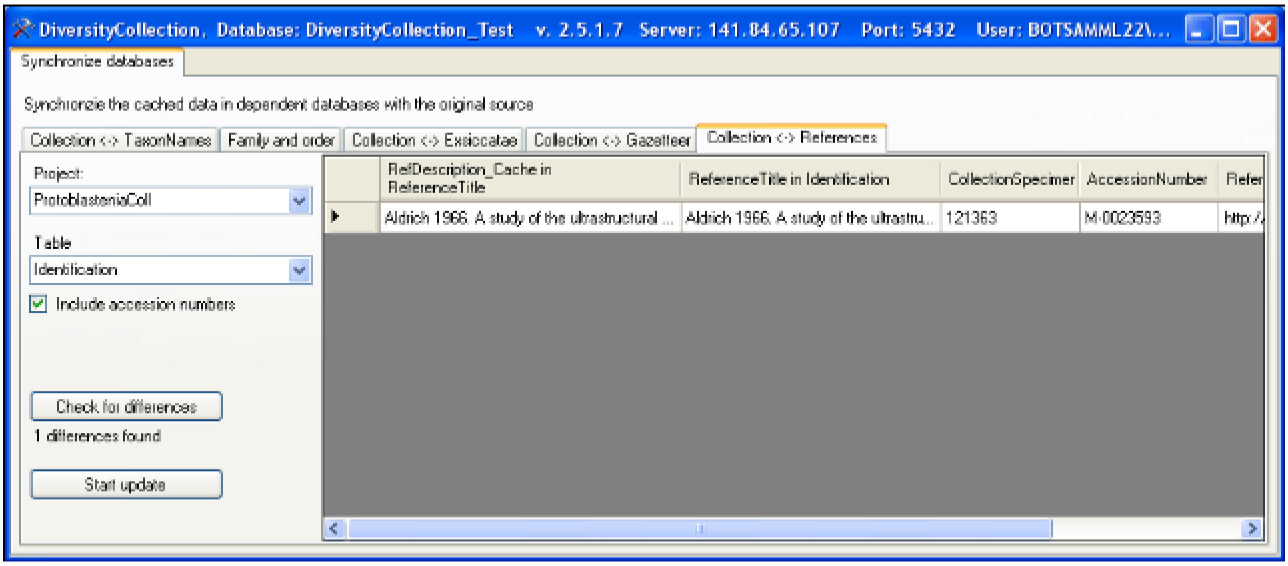
Original content that does not match any entry in the country list of DiversityGazetteer

The number of the occurences of an entry

The image above summarizes the options for an update of the country. You can restrict your query to one of the projects you have access to. If you want to check single datasets, check the **include accession numbers** option before you start the query. To keep the old entry in the Notes field check the **Add original to notes** option.

Maintenance - References

To synchronize the titles of the references that are linked to the module DiversityReferences choose **Administration -> Maintenance** from the menu. A window as shown below will open. On the tab page **Collection <-> References** select the project for which the reference titles should be synchronized. There are 3 tables which may contain links to DiversityReferences: CollectionEvent, CollectionSpecimen and Identification. Choose one of these tables for the synchronization. Then start the query with a click on the Check for differences button.



DiversityCollection, Database: DiversityCollection_Test v. 2.5.1.7 Server: 141.84.65.107 Port: 5432 User: BOTSAMML22\...

Synchronize databases

Synchronzie the cached data in dependent databases with the original source

Project: ProtoblasteniaColl

Table: Identification

☑ Include accession numbers

1 differences found

	RefDescription_Cache in ReferenceTitle	ReferenceTitle in Identification	CollectionSpecimen	AccessionNumber	Refer
▶	Aldrich 1966. A study of the ultrastructural ...	Aldrich 1966. A study of the ultrastru...	121363	M-0023593	http:/

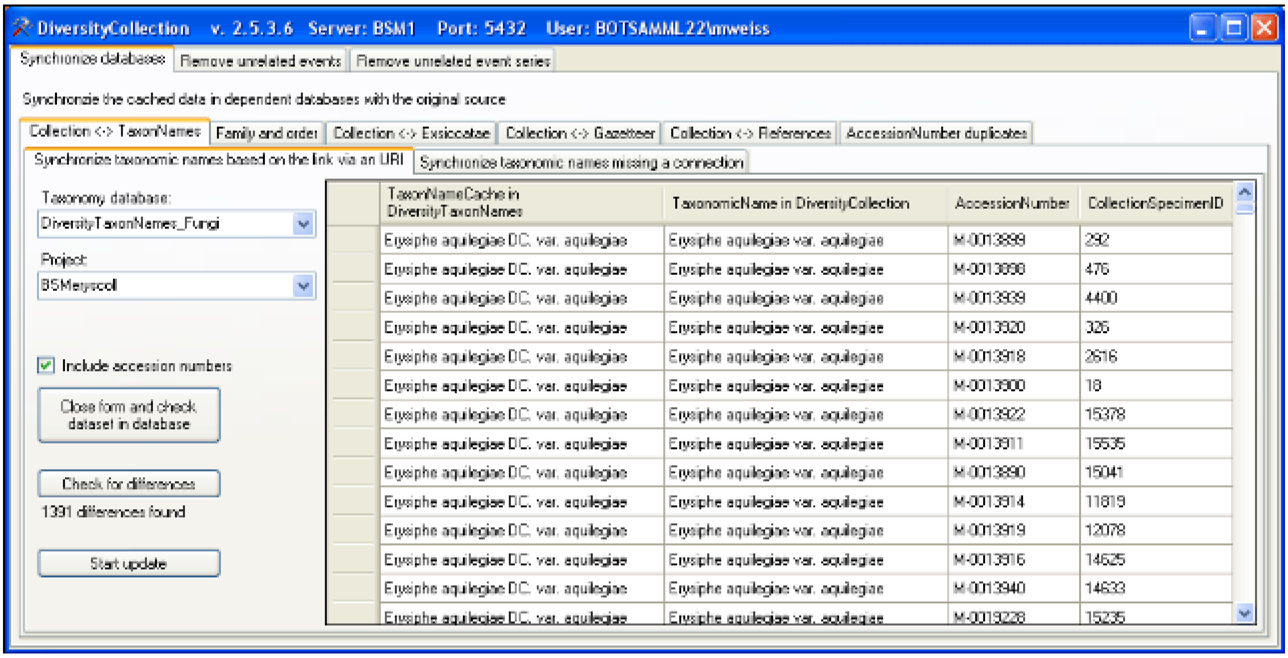
The form will list all differences found. To update the database click on the Start update button. If you want to have a more detailed look on one of the datasets in the list data you have to check the "Include accession number" checkbox before starting the query. A button Close form and check dataset in database will appear that will take you back to a single dataset in the database.

Maintenance - Taxonomic names

To synchronize the entries for the taxonomic names derived from the module DiversityTaxonNames choose **Administration -> Maintenance...** from the menu. A window as shown below will open. To synchronize the taxonomic names for entries linked to the module DiversityTaxonNames choose the tab **Collection <-> TaxonNames**. There are two ways to synchronize taxonomic names. You can either **Synchronize taxonomic names based on the link via an URI** for entries where the link to a taxonomic database is allready established or you can **Synchronize taxonomic names missing a connection**, where no link is established and you can query for identical names in one of the databases.

Synchronize taxonomic names based on the link via an URI

The taxonomic names are stored in the field TaxonomicName in the table Identification. Select a taxonomic database and a project that should be synchronized. Than start the query with a click on the Check for differences button.



Synchronzie the cached data in dependent databases with the original source

Taxonomy database: DiversityTaxonNames_Fungi

Project: BSMeyscoll

☑ Include accession numbers

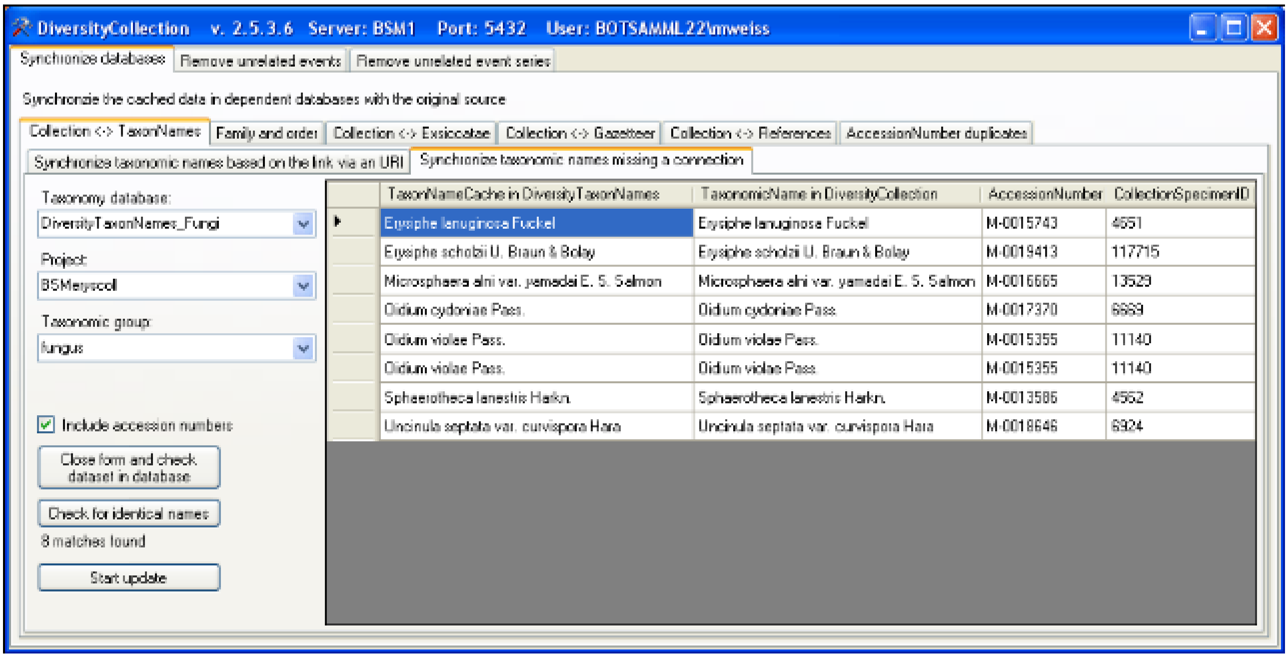
1391 differences found

TaxonNameCache in DiversityTaxonNames	TaxonomicName in DiversityCollection	AccessionNumber	CollectionSpecimenID
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013899	292
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013898	476
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013939	4400
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013920	326
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013918	2616
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013900	18
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013922	15378
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013911	15535
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013890	15041
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013914	11819
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013919	12078
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013916	14625
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0013940	14633
Erysiphe aquilegiae DC. var. aquilegiae	Erysiphe aquilegiae var. aquilegiae	M-0019228	15235

The form will list all differences found. To update the database click on the Start update button. If you want to have a more detailed look on your data you have to check the **Include accession number** checkbox before starting the query. A button Close form and check dataset in database will appear that will take you back to a single dataset in the database.

Synchronize taxonomic names missing a connection

Select a taxonomic database, a project and a taxonomic group to search for identical names. Than start the query with a click on the **Check for identical names** button.



Synchronize the cached data in dependent databases with the original source

Taxonomy database: DiversityTaxonNames_Fungi

Project: BSMeryscoll

Taxonomic group: fungus

☑ Include accession numbers

8 matches found

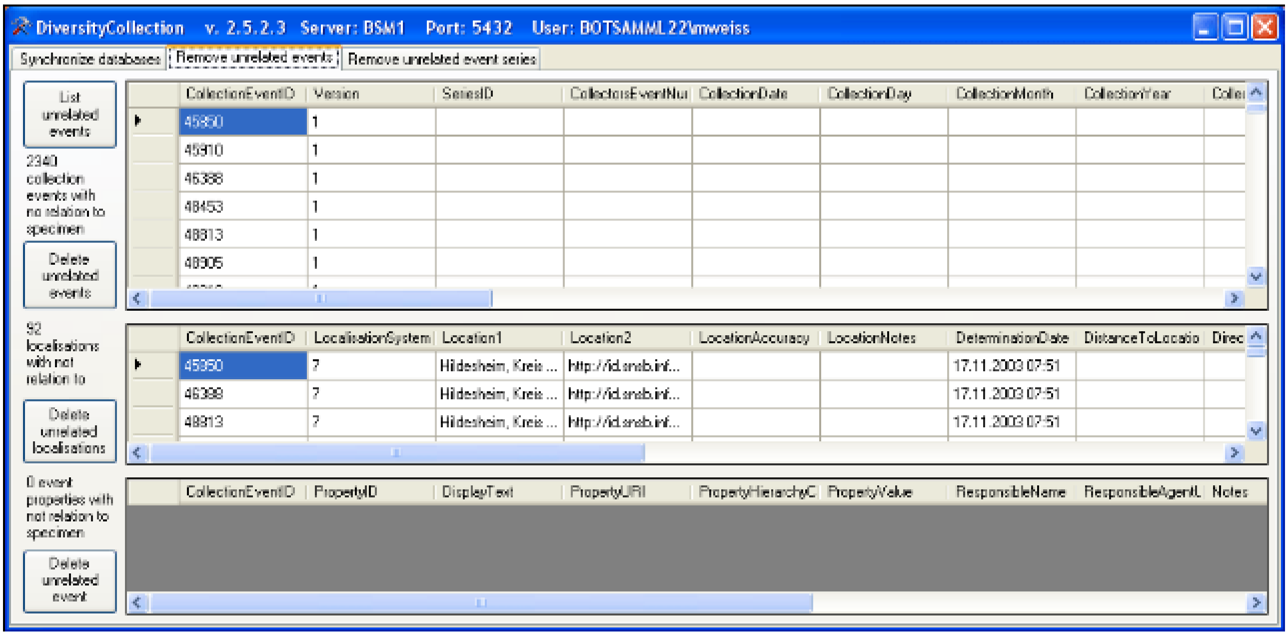
TaxonNameCache in DiversityTaxonNames	TaxonomicName in DiversityCollection	AccessionNumber	CollectionSpecimenID
Erysiphe lanuginosa Fuckel	Erysiphe lanuginosa Fuckel	M-0015743	4651
Erysiphe scholzii U. Braun & Bolay	Erysiphe scholzii U. Braun & Bolay	M-0019413	117715
Microsphaera alni var. yamadai E. S. Salmon	Microsphaera alni var. yamadai E. S. Salmon	M-0016665	13529
Oidium cydoniae Pass.	Oidium cydoniae Pass.	M-0017370	6669
Oidium violee Pass.	Oidium violae Pass.	M-0015355	11140
Oidium violae Pass.	Oidium violae Pass.	M-0015355	11140
Sphaerotheca lanestris Harkn.	Sphaerotheca lanestris Harkn.	M-0013586	4562
Uncinula septata var. curvispora Hara	Uncinula septata var. curvispora Hara	M-0018646	6924

The form will list all matches found. To insert the links to the database click on the Start update button. If you want to have a more detailed look on your data you have to check the **Include accession number** checkbox before starting the query. A button Close form and check dataset in database will appear that will take you back to a single dataset in the database.

Maintenance - Unrelated data

Collection events

Provided you have the proper rights, you can remove unlinked datasets in the tables CollectionEvent and CollectionEventSeries. To delete events that are not linked to any data in the database, use the tab page **[Remove unrelated events]**. These unrelated datasets may e.g. be derived from specimens that were transferred to another collection event. Click on the **[List unrelated events]** button to list all events that are not related to a specimen. The found collection events will be listed in the upper part of the form. The lower parts show the localisations and the event properties related to these collection events. These must be deleted first before you can delete the events related to these datasets. Otherwise only the events with no relations to localisations or properties will be deleted.



2340 collection events with no relation to specimen

CollectionEventID	Version	SeriesID	CollectorsEventNu	CollectionDate	CollectionDay	CollectionMonth	CollectionYear	Colle
45850	1							
45910	1							
46388	1							
48453	1							
48813	1							
48905	1							

92 localisations with not relation to

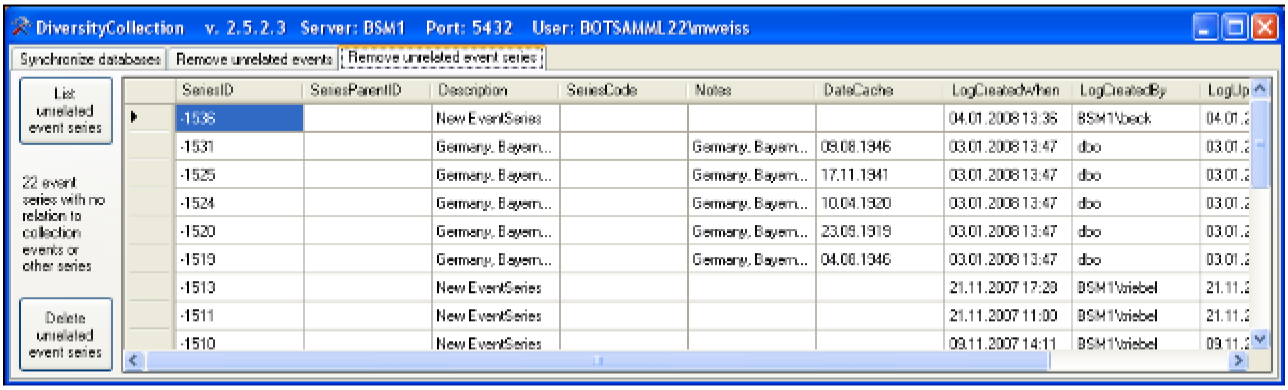
CollectionEventID	LocalisationSystem	Location1	Location2	LocationAccuracy	LocationNotes	DeterminationDate	DistanceToLocatio	Direc
45850	7	Hildesheim, Kreis ...	http://id.snsb.inf...			17.11.2003 07:51		
46388	7	Hildesheim, Kreis ...	http://id.snsb.inf...			17.11.2003 07:51		
48813	7	Hildesheim, Kreis ...	http://id.snsb.inf...			17.11.2003 07:51		

0 event properties with not relation to specimen

CollectionEventID	PropertyID	DisplayText	PropertyURI	PropertyHierarchyC	PropertyValue	ResponsibleName	ResponsibleAgentL	Notes

Collection event series

To delete collection event series with no relation to collection events or other event series, choose the tab page **[Remove unrelated event series]**. Click the **[List unrelated event series]** to list these series and the [Delete unrelated event series] button to delete them. .



22 event series with no relation to collection events or other series

SeriesID	SeriesParentID	Description	SeriesCode	Notes	DateCache	LogCreatedWhen	LogCreatedBy	LogUp
-1536		New EventSeries				04.01.2008 13:36	BSM1\beck	04.01.2
-1531		Germany, Bayern...		Germany, Bayern...	09.08.1946	03.01.2008 13:47	dbo	03.01.2
-1525		Germany, Bayern...		Germany, Bayern...	17.11.1941	03.01.2008 13:47	dbo	03.01.2
-1524		Germany, Bayern...		Germany, Bayern...	10.04.1920	03.01.2008 13:47	dbo	03.01.2
-1520		Germany, Bayern...		Germany, Bayern...	23.09.1919	03.01.2008 13:47	dbo	03.01.2
-1519		Germany, Bayern...		Germany, Bayern...	04.08.1946	03.01.2008 13:47	dbo	03.01.2
-1513		New EventSeries				21.11.2007 17:20	BSM1\triebel	21.11.2
-1511		New EventSeries				21.11.2007 11:00	BSM1\triebel	21.11.2
-1510		New EventSeries				09.11.2007 14:11	BSM1\triebel	09.11.2

Import and export

There are several import and export mechanisms:

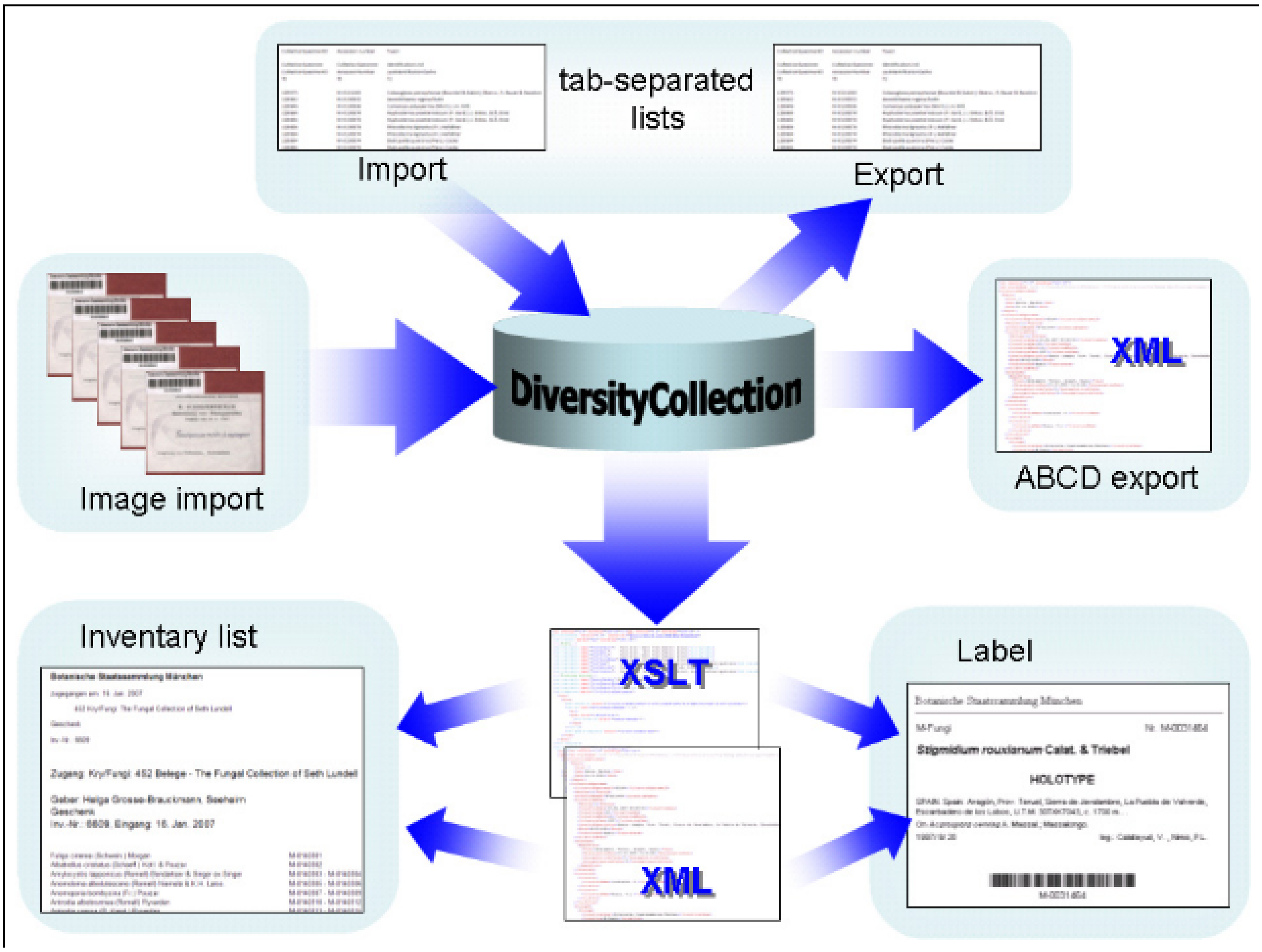
Import of specimen scans: Import image data where the accession number is a part of the file name can be imported together with default informations to the whole batch.

Import, **export** and **reimport** **of tab-separated lists**: Import data from foreign sources, export data and reimport after external editing.

Export of XML data according to the ABCD schema 2.06.

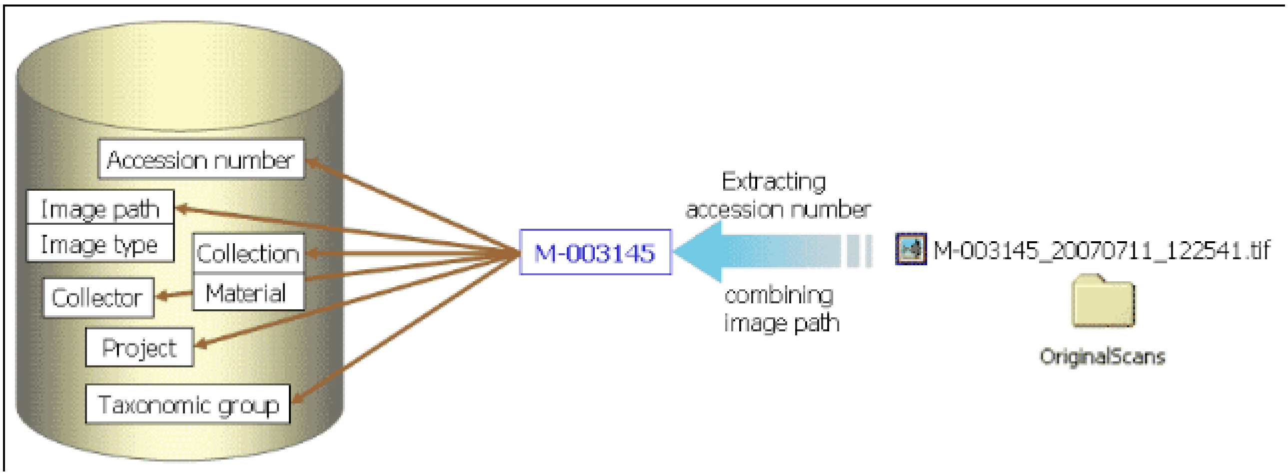
Generation of **labels**.

Generation of **inventary lists**.

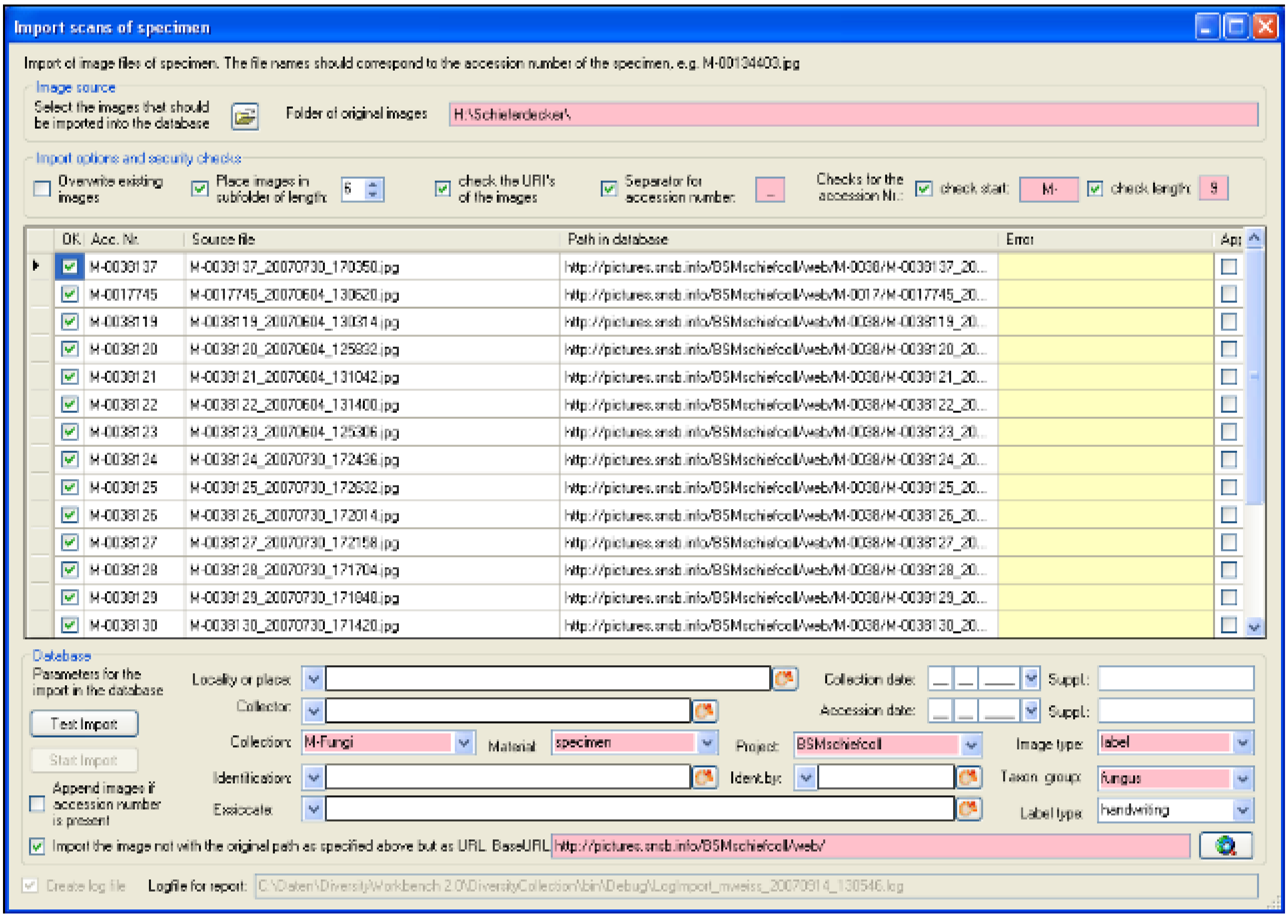


Import specimen scans

With this import routine, you can import new datasets along with new images into the database. To achieve this the image files should be named corresponding to the accession numbers of the datasets that should be imported (e.g. M-003145 in the example below) and an optional trailing identifier (e.g. _20070711_122541 in the example below). The image below shows an overview of the whole import process.



To import images like scanned labels from specimens choose **Data - Import - Specimen scans...** from the menu. A window for the import of images will be opened (see below).



Import of image files of specimen. The file names should correspond to the accession number of the specimen, e.g. M-00134403.jpg

Image source

Select the images that should be imported into the database

Folder of original images: H:\Schieferdecker\

Import options and security checks

☐ Overwrite existing images

☑ Place images in subfolder of length: 6

☑ check the URI's of the images

☑ Separator for accession number: _

Checks for the accession Nr.: ☑ check start: M- ☑ check length: 9

	OK	Acc. Nr.	Source file	Path in database	Error	Ap
▸	☑	M-0038137	M-0038137_20070730_170350.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038137_20...		☐
	☑	M-0017745	M-0017745_20070604_130620.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0017/M-0017745_20...		☐
	☑	M-0038119	M-0038119_20070604_130314.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038119_20...		☐
	☑	M-0038120	M-0038120_20070604_125832.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038120_20...		☐
	☑	M-0038121	M-0038121_20070604_131042.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038121_20...		☐
	☑	M-0038122	M-0038122_20070604_131400.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038122_20...		☐
	☑	M-0038123	M-0038123_20070604_125306.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038123_20...		☐
	☑	M-0038124	M-0038124_20070730_172436.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038124_20...		☐
	☑	M-0038125	M-0038125_20070730_172632.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038125_20...		☐
	☑	M-0038126	M-0038126_20070730_172014.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038126_20...		☐
	☑	M-0038127	M-0038127_20070730_172158.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038127_20...		☐
	☑	M-0038128	M-0038128_20070730_171704.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038128_20...		☐
	☑	M-0038129	M-0038129_20070730_171848.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038129_20...		☐
	☑	M-0038130	M-0038130_20070730_171420.jpg	http://pictures.snsb.info/BSMschiefcoll/web/M-0038/M-0038130_20...		☐

Database

Parameters for the import in the database

Locality or place:

Collector:

Collection: M-Fungi

Material: specimen

Project: BSMschiefcoll

Identification:

Ident.by:

Exsiccata:

Collection date: __ __ ____ Suppl.:

Accession date: __ __ ____ Suppl.:

Image type: label

Taxon group: fungus

Label type: handwriting

Test Import

Start Import

☐ Append images if accession number is present

☑ Import the image not with the original path as specified above but as URL. BaseURL: http://pictures.snsb.info/BSMschiefcoll/web/

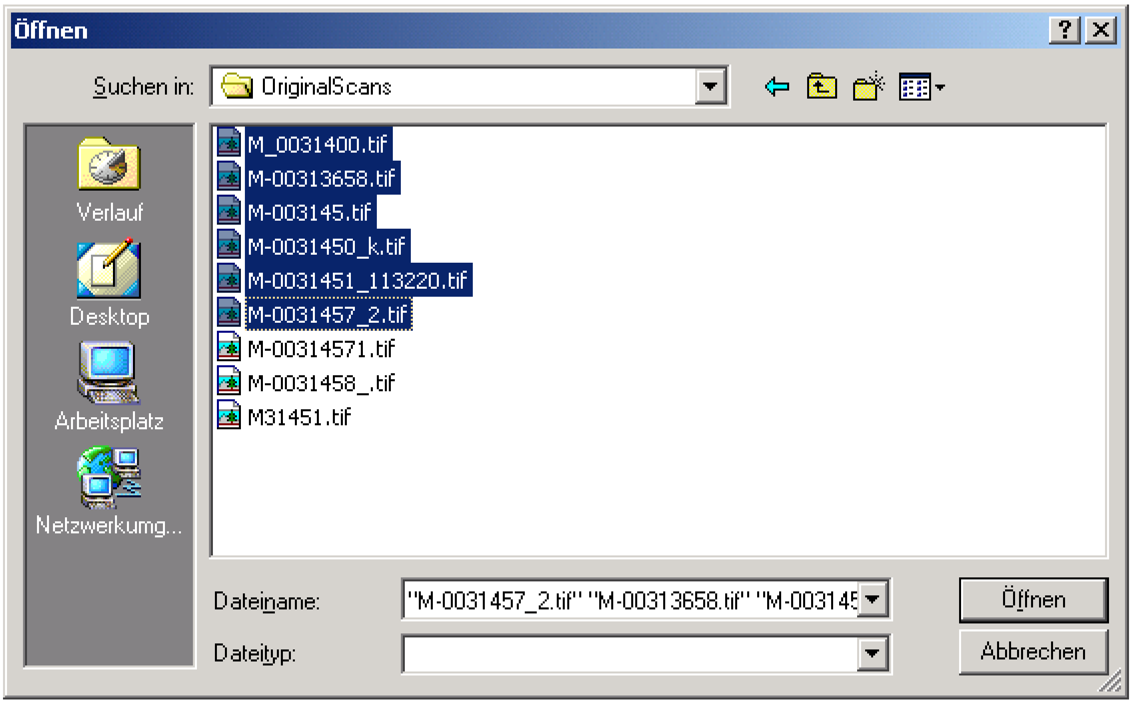
☑ Create log file

Logfile for report: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\LogImport_mweiss_20070914_130546.log

The fields marked with red are mandatory.

Image source

To select the images you want to import in the database click on the 📂 button. A dialog will open, where you can select the images that you want to import into your database.



Suchen in: OriginalScans

- M_0031400.tif
- M-00313658.tif
- M-003145.tif
- M-0031450_k.tif
- M-0031451_113220.tif
- M-0031457_2.tif
- M-00314571.tif
- M-0031458_.tif
- M31451.tif

Dateiname: "M-0031457_2.tif" "M-00313658.tif" "M-003145

Select the files and close the window to enter the selection of the images in the list in the form.

Import options and security checks

If you want to replace datasets for images already in the database, check the **Overwrite existing images** checkbox. If the images are located in a subfolder, that is named according to the first characters of the accession number, check the **Place images in subfolder of length** checkbox and specify the length of the name of the folder. If you want to check the URIs of the images check the corresponding checkbox. The datasets will then only be imported if the images are available on the web. If the filename next to the accession number contains a trailing identifier, this must be separated by a unique character. Check the corresponding box and enter the separating character. If you want to check whether the accession numbers are correct you can check the start and the length of the accession number by checking the appropriate checkboxes.

Image list

The list shows the image files selected for the import. To test if all files satisfy the specified checks, click on the **Test import** button. If the file name passed all checks, the OK field for the image will be checked after the test. Otherwise an explanation for not passing the checks will be shown in the Error column.

The second column of the list shows the accession number extracted from the file name, the second column the file name of the original image file and the path written in the database. These paths may differ from the original if you select the option for setting a different **BaseURL**. If a dataset for an image already exists in the database and you selected the **Append images** option, the checkbox **Append** at the right end of the table will be checked.

Database

You can set several mandatory and optional values that will be written in the database for all imported data. The fields marked with red are mandatory. These are the collection in which the specimens are located, the material categories of the specimens, the project, the content type of the scans (e.g. label) and the taxonomic group of the main organism in the specimens. If you want to refer to a web source for the labels instead of a local file you must give the base URL as well. Optional fields are a place according to the DiversityGazetteer and the date of the gathering event, the collector, the accession date, an identification, an exsiccatal series and the type of the label. For explanation of the buttons see module related entries .

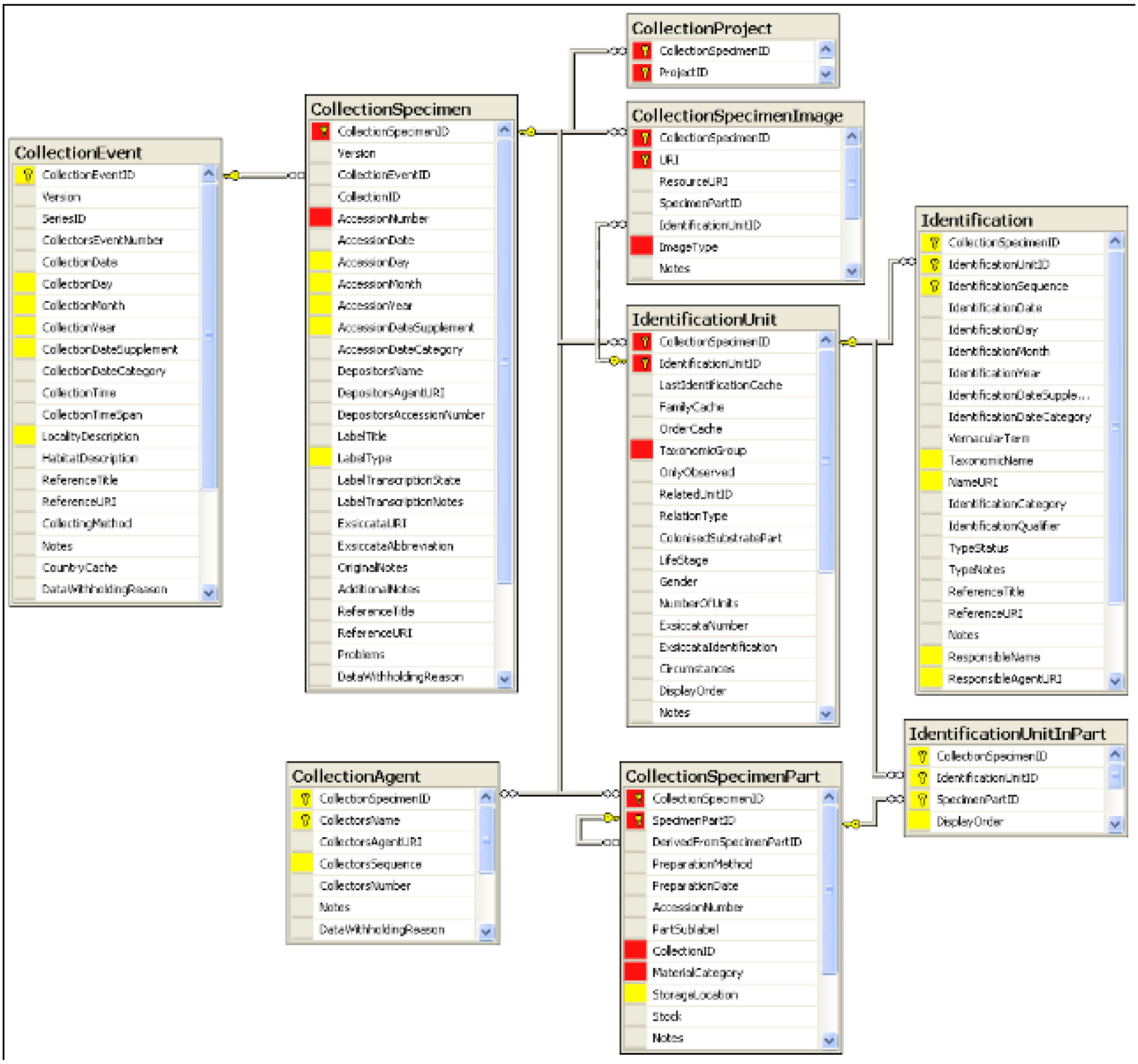
To test the import and whether the images are present in the database click on the [Test Import] button. If everything is fine click on the [Start Import] button to start the import.

Logfile: To log the list of imported images and any errors during the import, check the Create log file checkbox. This will create a log file with your name, the date and time of the import in the directory where the image files are located.

The program will check, whether an accession number is already present in the database. It will only import the data, if the option **Append images if accession number is present** is checked. Otherwise these data will not be imported.

If the images will be provided by a webserver, check the appropriate checkbox and specify the folder or click on the 🔍 button of search for the website.

In tIn the overview below the mandatory fields are marked with red, the optional fields with yellow.


CollectionEvent
CollectionEventID
Version
SeriesID
CollectorsEventNumber
CollectionDate
CollectionDay
CollectionMonth
CollectionYear
CollectionDateSupplement
CollectionDateCategory
CollectionTime
CollectionTimeSpan
LocalityDescription
HabitatDescription
ReferenceTitle
ReferenceURI
CollectingMethod
Notes
CountryCache
DataWithholdingReason
CollectionSpecimen
CollectionSpecimenID
Version
CollectionEventID
CollectionID
AccessionNumber
AccessionDate
AccessionDay
AccessionMonth
AccessionYear
AccessionDateSupplement
AccessionDateCategory
DepositorsName
DepositorsAgentURI
DepositorsAccessionNumber
LabelTitle
LabelType
LabelTranscriptionState
LabelTranscriptionNotes
ExsiccataURI
ExsiccataAbbreviation
OriginalNotes
AdditionalNotes
ReferenceTitle
ReferenceURI
Problems
DataWithholdingReason
CollectionProject
CollectionSpecimenID
ProjectID
CollectionSpecimenImage
CollectionSpecimenID
URI
ResourceURI
SpecimenPartID
IdentificationUnitID
ImageType
Notes
IdentificationUnit
CollectionSpecimenID
IdentificationUnitID
LastIdentificationCache
FamilyCache
OrderCache
TaxonomicGroup
OnlyObserved
RelatedUnitID
RelationType
ColonisedSubstratePart
LifeStage
Gender
NumberOfUnits
ExsiccataNumber
ExsiccataIdentification
Circumstances
DisplayOrder
Notes
Identification
CollectionSpecimenID
IdentificationUnitID
IdentificationSequence
IdentificationDate
IdentificationDay
IdentificationMonth
IdentificationYear
IdentificationDateSupple...
IdentificationDateCategory
VernacularTerm
TaxonomicName
NameURI
IdentificationCategory
IdentificationQualifier
TypeStatus
TypeNotes
ReferenceTitle
ReferenceURI
Notes
ResponsibleName
ResponsibleAgentURI
IdentificationUnitInPart
CollectionSpecimenID
IdentificationUnitID
SpecimenPartID
DisplayOrder
CollectionAgent
CollectionSpecimenID
CollectorsName
CollectorsAgentURI
CollectorsSequence
CollectorsNumber
Notes
DataWithholdingReason
CollectionSpecimenPart
CollectionSpecimenID
SpecimenPartID
DerivedFromSpecimenPartID
PreparationMethod
PreparationDate
AccessionNumber
PartSublabel
CollectionID
MaterialCategory
StorageLocation
Stock
Notes

Import tab-separated lists

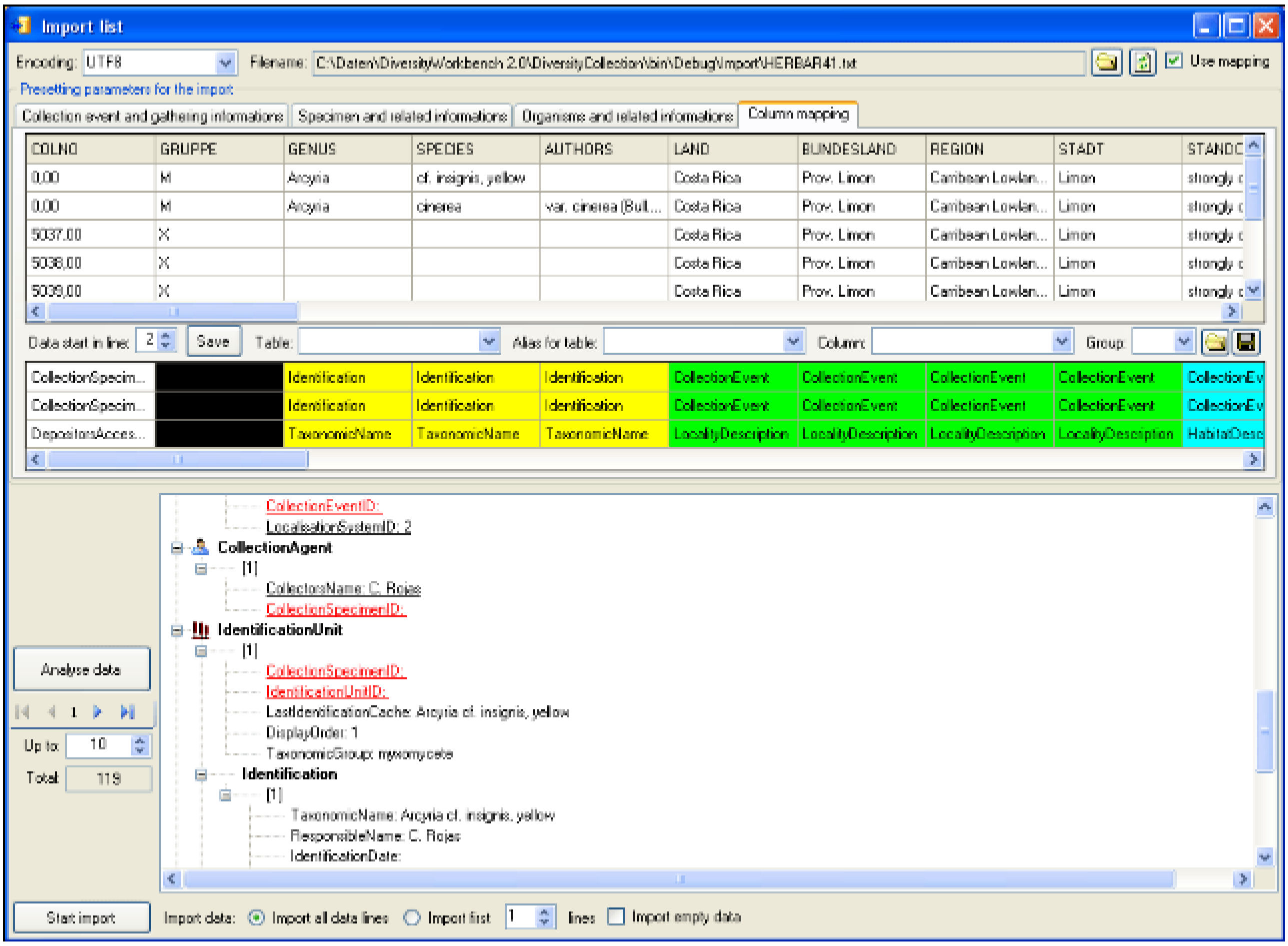
With this import routine, you can import data as tab-separated lists into the database. Choose **Data -> Import -> Import list...** from the menu to open the window for the import. In the window click on the 📂button to select the file with the data you want to import. Use the proper **[encoding]** to ensure that all special characters will be transferred correctly. If you change the encoding after opening the file, click on the 🔄button to reload the file with the new encoding.

The content of the file will be shown in the upper part of the **[Column mapping]** tab page. Use the **[Data start in line]** to set the area for the import. Preceeding lines will be ignored and depicted with a gray background as shown below. Every column in your file must be either ignored of mapped to a column in the database. The lower part of the mapping section shows your mapping, while the upper part contains the first lines of your file. You can either use a prepared column mapping or create a new one. To import a previous column mapping, click on the 📂 button and choose one of the XML-files.

Column mapping

For a column that should not be imported, choose the black color from the group as shown for the second column in the image below. These columns will be ignored for the analysis and the import. For all other columns choose the **[Table]** and the **[Column]** your data correspond to. If you want to import two different datasets in the same table, you have to change the **[Alias for table]** to a unique value for this dataset.

If some columns should be transferred into one field, you have to choose a group for these column as shown below for columns 3 to 5, 6 to 9, ... To do this, just choose a color from the group combobox other than white or black. To save the current mapping, click on the 💾 button.



Encoding: UTF8

Filename: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\Import\HERBAR41.txt

☑ Use mapping

COLNO	GRUPPE	GENUS	SPECIES	AUTHORS	LAND	BUNDESLAND	REGION	STADT	STANDC
0,00	M	Arcyria	cf. insignis, yellow		Costa Rica	Prov. Limon	Caribean Lowlan...	Limon	strongly c
0,00	M	Arcyria	cinerea	var. cinerea (Bull...	Costa Rica	Prov. Limon	Caribean Lowlan...	Limon	strongly c
5037,00	X				Costa Rica	Prov. Limon	Caribean Lowlan...	Limon	strongly c
5038,00	X				Costa Rica	Prov. Limon	Caribean Lowlan...	Limon	strongly c
5039,00	X				Costa Rica	Prov. Limon	Caribean Lowlan...	Limon	strongly c

Data start in line: 2

CollectionSpecim...		Identification	Identification	Identification	CollectionEvent	CollectionEvent	CollectionEvent	CollectionEvent	CollectionEv
CollectionSpecim...		Identification	Identification	Identification	CollectionEvent	CollectionEvent	CollectionEvent	CollectionEvent	CollectionEv
DepositorsAcces...		TaxonomicName	TaxonomicName	TaxonomicName	LocalityDescription	LocalityDescription	LocalityDescription	LocalityDescription	HabitatDesc

```
    CollectionEventID:
    LocalisationSystemID: 2
CollectionAgent
  [1]
    CollectorsName: C. Rojas
    CollectionSpecimenID:
IdentificationUnit
  [1]
    CollectionSpecimenID:
    IdentificationUnitID:
    LastIdentificationCache: Arcyria cf. insignis, yellow
    DisplayOrder: 1
    TaxonomicGroup: myxomycete
  Identification
    [1]
      TaxonomicName: Arcyria cf. insignis, yellow
      ResponsibleName: C. Rojas
      IdentificationDate:
```

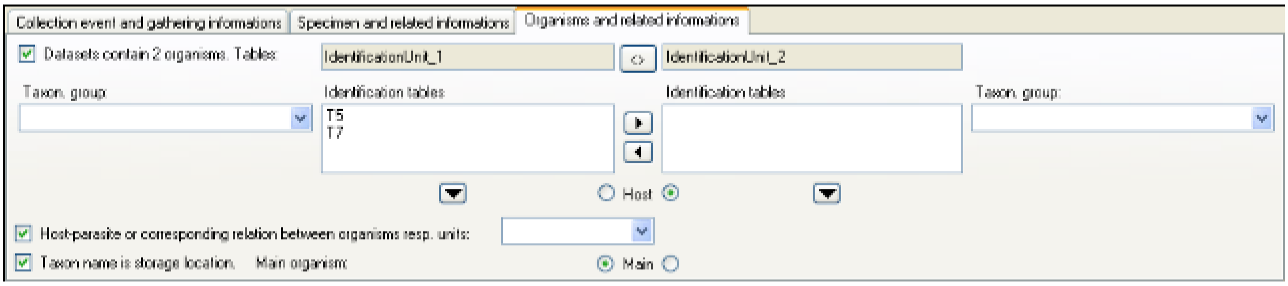
Up to: 10

Total: 119

Import data: ● Import all data lines ○ Import first 1 lines ☐ Import empty data

To analyse the data in the file click on the **[Analyse]** button. During the analysis the program may ask you to give additional information, like the taxonomic groups of the imported organisms. In the upper part of the window you can add informations that should be imported together with your data from the file. The available options depend on the structure of your data.

The image below shows the tab page where you can define the relations between two organisms. This might be necessary if e.g. your data contain informations of parasites and hosts. The data tables that are related to an identification are listed with their aliases in the lists for the identification tables. Use the ▶ and ◀ buttons to move them between the lists. Use the ▼ buttons to change the sequence within a list. With the **[Host]** option ○ Host ● you define the host and the **[Main]** option defines which organism will be chosen as the first to be printed e.g. on a label.



☑ Datasets contain 2 organisms. Tables: IdentificationUnit_1 | IdentificationUnit_2

Taxon. group:

Identification tables: T5, T7

Identification tables:

Taxon. group:

○ Host ●

☑ Host-parasite or corresponding relation between organisms resp. units:

☑ Taxon name is storage location.

Main organism: ● Main ○

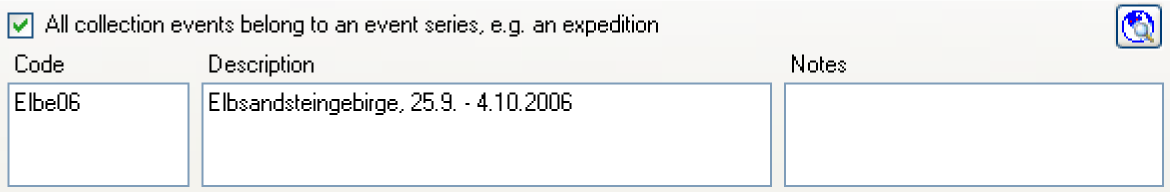
By default one collection event will be created for each dataset.

● Separate collection events

If the events should be joined following the entries in the file, you can choose the second option as shown below. The import will create a new event if there is any change in the data related to the collection event, like the description of the locality, the altitude, the coordinates etc.

● Group collection events

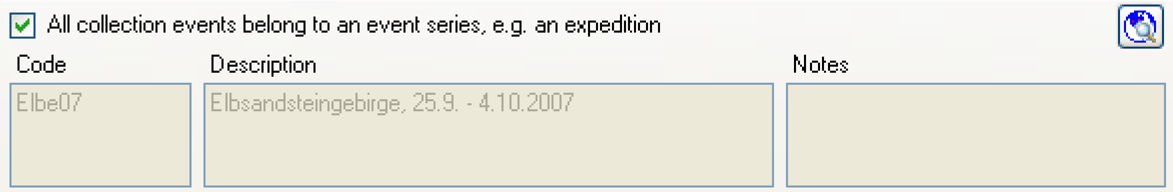
If all the dataset are belonging to one event series, e.g. to one expedition, you can choose the option as shown below and enter the code and description of the event series in the corresponding fields.



☑ All collection events belong to an event series, e.g. an expedition

Code	Description	Notes
Elbe06	Elbsandsteingebirge, 25.9. - 4.10.2006	

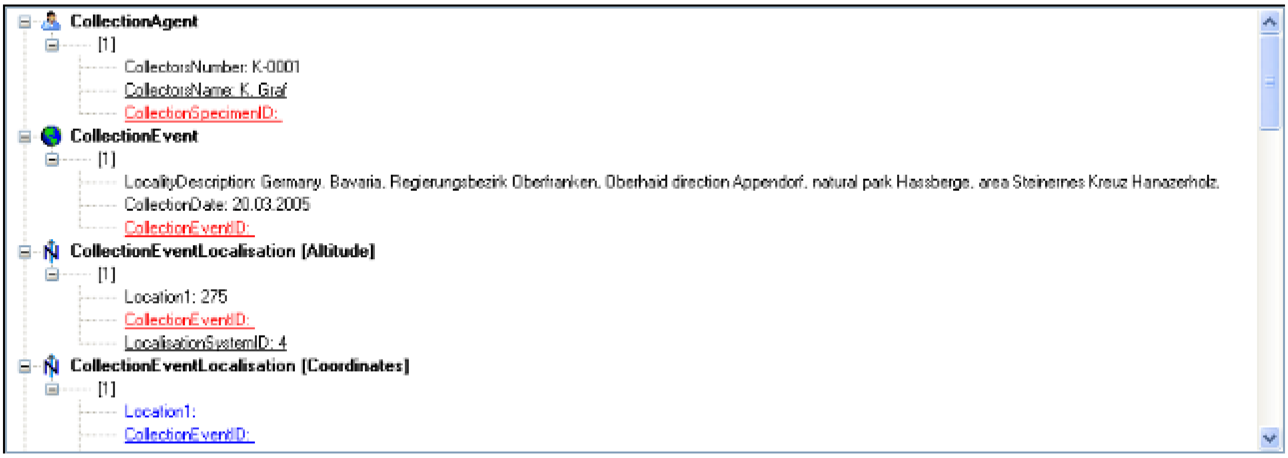
If you want to use an existing event series, click on the button and select a series from the form. The code and description of the selected series will be shown as in the image below.



☑ All collection events belong to an event series, e.g. an expedition

Code	Description	Notes
Elbe07	Elbsandsteingebirge, 25.9. - 4.10.2007	

After your data where successfully analysed, the window will show you the result as shown in the image below. During the analysis, the program will add missing tables and columns necessary for the import. The first dataset will be shown in the form. If you want to check more datasets, set the number of the last position you want to check and click on the **[Analyse]** button. The data are arranged according to the tables in the database in which they will be imported. The underlined fields belong the the primary keys of the respective tables and are red if missing. These missing values will be generated during the import. If a dataset contains no values and will therefore not be imported into the database, the colums will be shown in blue. To import these entries in any case, choose the **[import empty values]** option. To browse through the datasets in the preview use the |◀ ◀ 2 ▶ ▶| buttons.

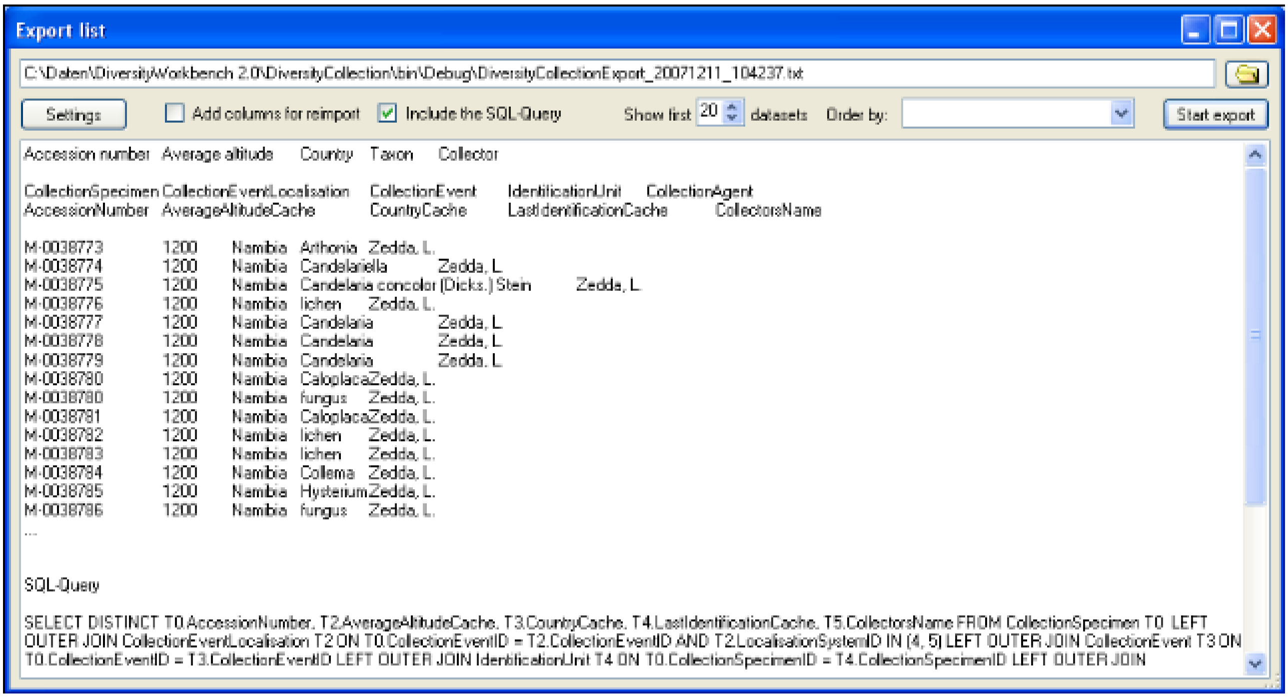


```
CollectionAgent
    [1]
        CollectorsNumber: K-0001
        CollectorsName: K. Graf
        CollectionSpecimenID:
CollectionEvent
    [1]
        LocalityDescription: Germany. Bavaria. Regierungsbezirk Oberfranken. Oberhaid direction Appendorf. natural park Hassberge. area Steinernes Kreuz Hanazerholz.
        CollectionDate: 20.03.2005
        CollectionEventID:
CollectionEventLocalisation [Altitude]
    [1]
        Location1: 275
        CollectionEventID:
        LocalisationSystemID: 4
CollectionEventLocalisation [Coordinates]
    [1]
        Location1:
        CollectionEventID:
```

To import the data, click on the **[Start import]** button. If you want to import just a part of the data, e.g. for a test, choose the **[Import first ... lines]** option.

Export as tab-separated lists

You can export the content of the datasets listed in the specimen list into a tab-separated list. Choose **Data - Export - Export list...** from the menu. A window as shown below will open. To change the preset path of the export file use the button.



C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\DiversityCollectionExport_20071211_104237.txt

☐ Add columns for reimport

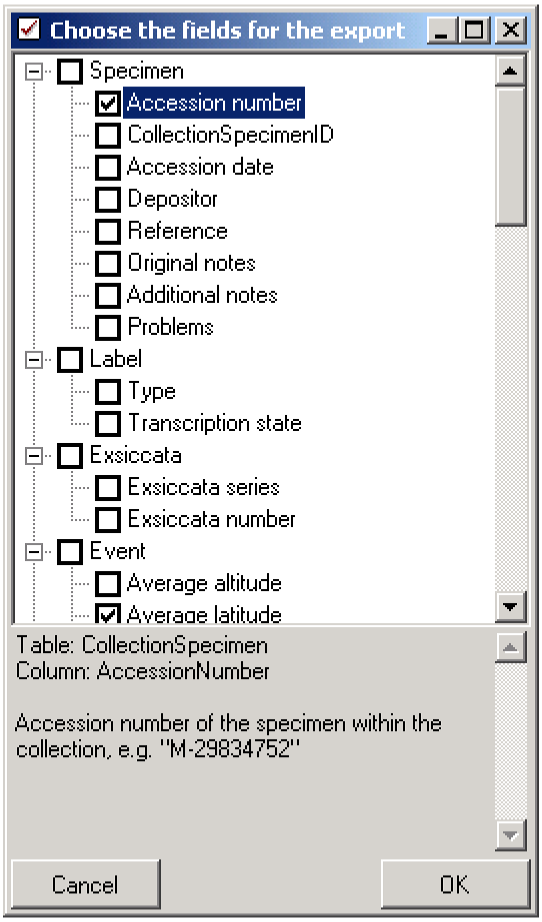
☑ Include the SQL-Query

Show first 20 datasets

```
Accession number	Average altitude	Country	Taxon	Collector

CollectionSpecimen CollectionEventLocalisation	CollectionEvent	IdentificationUnit	CollectionAgent
AccessionNumber	AverageAltitudeCache	CountryCache	LastIdentificationCache	CollectorsName

M-0038773	1200	Nambia	Arthonia	Zedda, L.
M-0038774	1200	Nambia	Candelariella	Zedda, L.
M-0038775	1200	Nambia	Candelaria concolor (Dicks.) Stein	Zedda, L.
M-0038776	1200	Nambia	lichen	Zedda, L.
M-0038777	1200	Nambia	Candelaria	Zedda, L.
M-0038778	1200	Nambia	Candelaria	Zedda, L.
M-0038779	1200	Nambia	Candelaria	Zedda, L.
M-0038780	1200	Nambia	CaloplacaZedda, L.
M-0038780	1200	Nambia	fungus	Zedda, L.
M-0038781	1200	Nambia	CaloplacaZedda, L.
M-0038782	1200	Nambia	lichen	Zedda, L.
M-0038783	1200	Nambia	lichen	Zedda, L.
M-0038784	1200	Nambia	Collema	Zedda, L.
M-0038785	1200	Nambia	HysteriumZedda, L.
M-0038786	1200	Nambia	fungus	Zedda, L.
...


SQL-Query

SELECT DISTINCT T0.AccessionNumber, T2.AverageAltitudeCache, T3.CountryCache, T4.LastIdentificationCache, T5.CollectorsName FROM CollectionSpecimen T0  LEFT
OUTER JOIN CollectionEventLocalisation T2 ON T0.CollectionEventID = T2.CollectionEventID AND T2.LocalisationSystemID IN (4, 5) LEFT OUTER JOIN CollectionEvent T3 ON
T0.CollectionEventID = T3.CollectionEventID LEFT OUTER JOIN IdentificationUnit T4 ON T0.CollectionSpecimenID = T4.CollectionSpecimenID LEFT OUTER JOIN
```

To start the export click on the **[Start export]** button. A file will be created in your application directory, containing the exported data. A preview of the data is shown in the lower part of the form. If you check the **include columns for reimport** option, the header will contain an additional line for table names which you can use for reimporting the data. If you check the **include the SQL-Query** option, the Text of the command for selecting the datasets will be attached at the end of your report. The form will show the first lines as set in the Show first ... datasets (range: 1 - 99) as a preview. During the first export, the list for the fields for sorting the results **[Order by:]** will be filled. So if you need sorted results just restart the export after selecting the field after the first export.

To choose the fields you want to see in the export click on the Settings button. A window will open as shown below, where you can choose the fields you want to export.



- ☐ Specimen
  - ☑ Accession number
  - ☐ CollectionSpecimenID
  - ☐ Accession date
  - ☐ Depositor
  - ☐ Reference
  - ☐ Original notes
  - ☐ Additional notes
  - ☐ Problems
- ☐ Label
  - ☐ Type
  - ☐ Transcription state
- ☐ Exsiccata
  - ☐ Exsiccata series
  - ☐ Exsiccata number
- ☐ Event
  - ☐ Average altitude
  - ☑ Average latitude

Table: CollectionSpecimen
Column: AccessionNumber

Accession number of the specimen within the collection, e.g. "M-29834752"

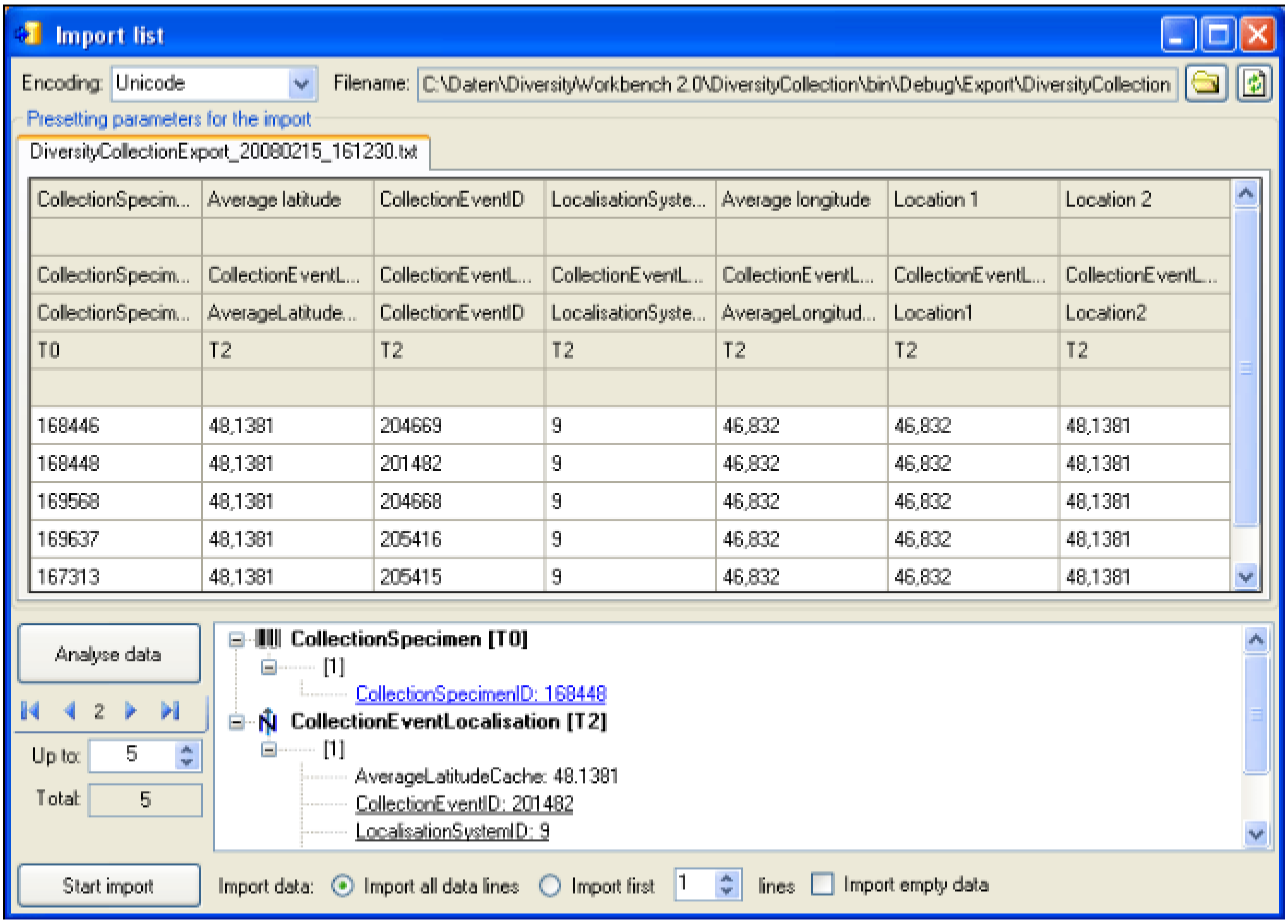
Please be aware, that you will get "cross joins" between the data in your database as in the example shown below. If for example you start an export containing taxa and collectors and you have 3 taxa and 2 collectors in a dataset this will result in 6 lines in the export: every taxon combined with every collector (3 x 2 = 6). To evaluate the data you have to group the results accordingly. The first line in the file corresponds to the description as shown in the form above for the selection of the export fields. The second line shows the tables and the third line the column within the database. The following lines contain the data.

Accession number	**Taxon**
CollectionSpecimen	**IdentificationUnit**
AccessionNumber	**LastIdentificationCache**
M-0013579	Arthrocladiella mougeotii (Lev.) Vassilkov
M-0013579	Arthrocladiella mougeotii (Lev.) Vassilkov
M-0013579	Blumeria graminis (DC.) Speer
M-0013579	Blumeria graminis (DC.) Speer
M-0013579	Lycium barbarum
M-0013579	Lycium barbarum

Reimport tab-separated lists

With this import routine, you can reimport data in tab-separated lists that had been exported from the database. Choose **Data -> Import -> Reimport list...** from the menu to open the window for the reimport. To reimport data, these must have been exported using the option **[add columns for reimport]** to ensure correct header lines in your file. As the client provides no possibility to change data on the basis of lists, you may export the respective data to a tab-separated list, change your values and reimport the data.

In the window click on the 📂 button to select the file with the data you want to import. Use the proper **[encoding]** to ensure that all special characters will be transferred correctly. If you change the encoding after opening the file, click on the 🔄 button to reload the file with the new encoding. The content of the file will be visible as shown below. For a reimport, the data will always start in line 7, indicated by a gray background of the header lines.



Import list

Encoding: Unicode

Filename: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\Export\DiversityCollection

Presetting parameters for the import

DiversityCollectionExport_20080215_161230.txt

CollectionSpecim...	Average latitude	CollectionEventID	LocalisationSyste...	Average longitude	Location 1	Location 2
CollectionSpecim...	CollectionEventL...	CollectionEventL...	CollectionEventL...	CollectionEventL...	CollectionEventL...	CollectionEventL...
CollectionSpecim...	AverageLatitude...	CollectionEventID	LocalisationSyste...	AverageLongitud...	Location1	Location2
T0	T2	T2	T2	T2	T2	T2
168446	48,1381	204669	9	46,832	46,832	48,1381
168448	48,1381	201482	9	46,832	46,832	48,1381
169568	48,1381	204668	9	46,832	46,832	48,1381
169637	48,1381	205416	9	46,832	46,832	48,1381
167313	48,1381	205415	9	46,832	46,832	48,1381

- CollectionSpecimen [T0]
  - [1]
    - CollectionSpecimenID: 168448
- CollectionEventLocalisation [T2]
  - [1]
    - AverageLatitudeCache: 48.1381
    - CollectionEventID: 201482
    - LocalisationSystemID: 9

Up to: 5

Total: 5

Import data: ● Import all data lines ○ Import first 1 lines ☐ Import empty data

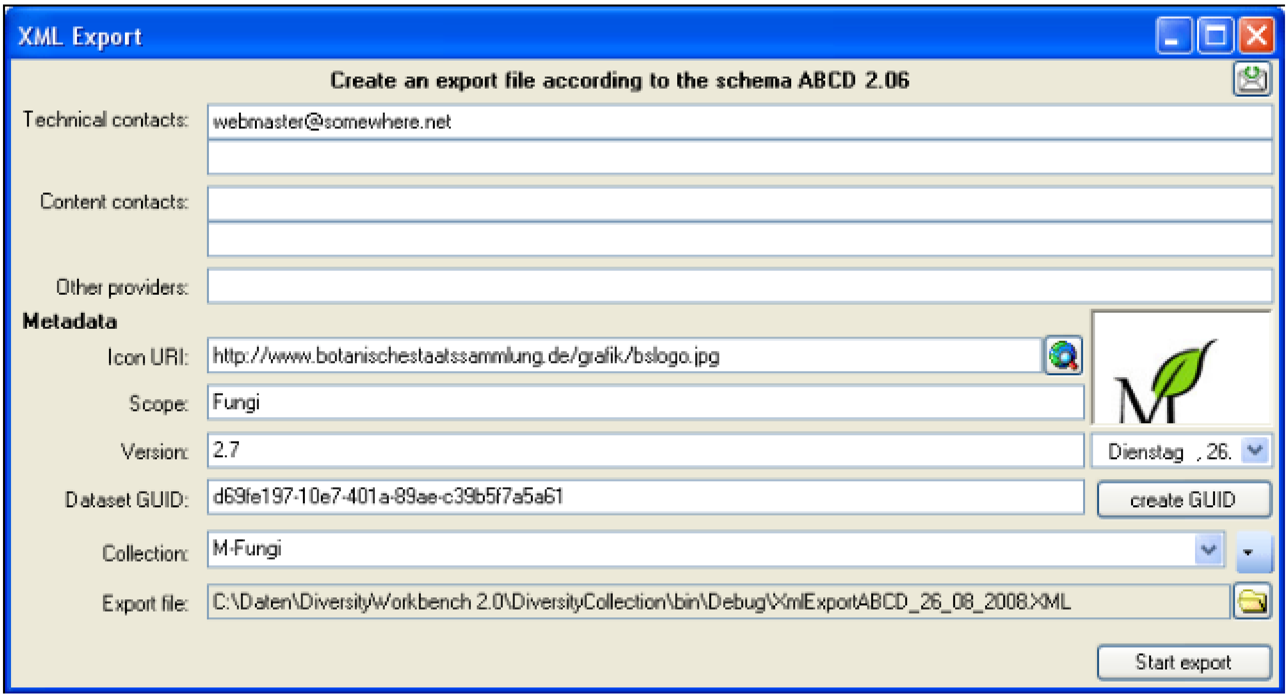
To analyse the data in the file click on the **[Analyse]** button. After a successful analysis, the window will show you the result as shown in the image below. The first dataset will be shown in the form. If you want to check more datasets, set the number of the last position you want to check and click on the **[Analyse]** button. The data are presented according to the tables in the database where they will be inserted. Underlined columns belong to the primary key of the respective tables and are red if missing. These missing values will be generated during the import. If a dataset contains no values and will therefore not be imported into the database respectively updated, the colums will be shown in blue. To import these entries in any case, choose the **[import empty values]** option. To browse through the datasets in the preview use the ⏮ ◀ 2 ▶ ⏭ buttons.

To import your data, click on the **[Start import]** button. If you want to import just a part of the data, e.g. for a test, choose the **[Import first ... lines]** option.

Export ABCD

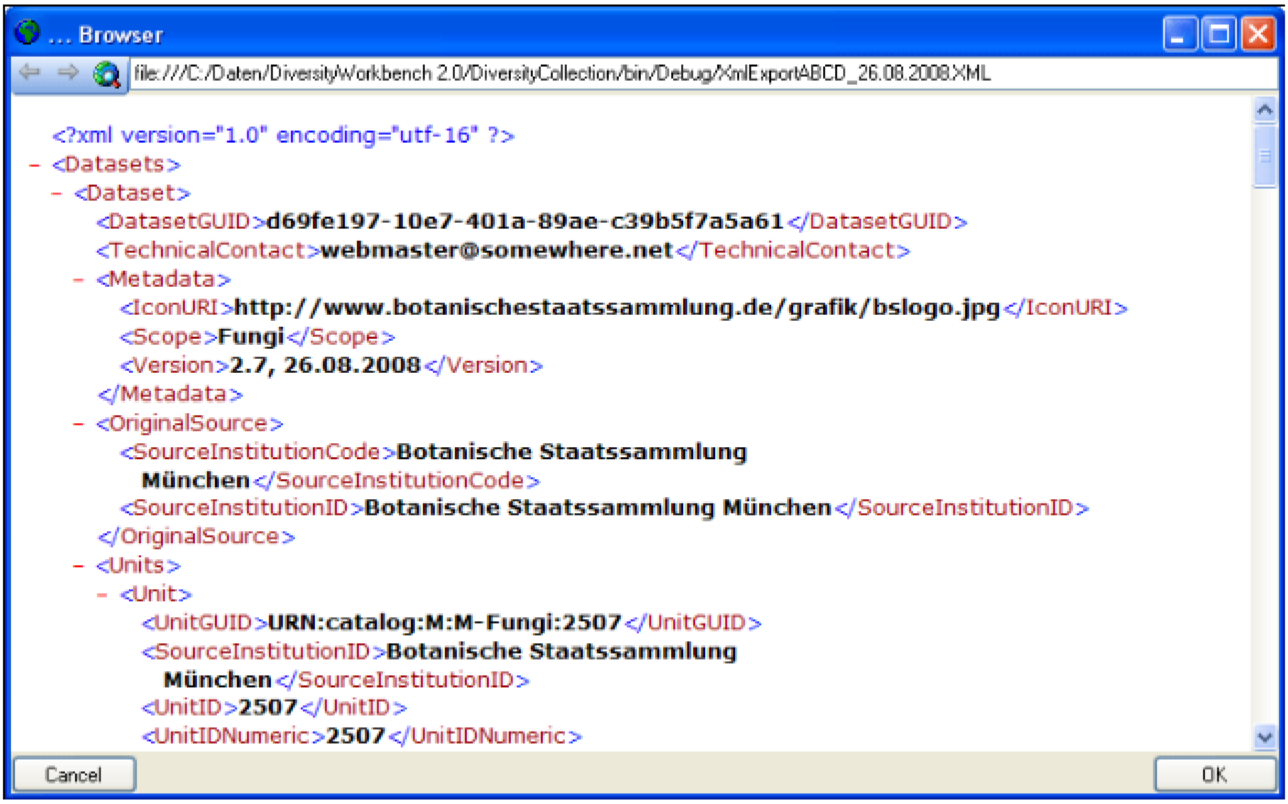
In the current version only the main data from DiversityCollection will be exported to ABCD.

To export the data of the specimen selected in the specimen list following the [ABCD schema 2.06]() choose **Data -> Export -> XML (ABCD Schema)...** from the menu. A window as shown below will open where you can set some additional parameters defined in ABCD resp. [BioCASE]().



Technical contacts: webmaster@somewhere.net
Content contacts:
Other providers:
Icon URI: http://www.botanischestaatssammlung.de/grafik/bslogo.jpg
Scope: Fungi
Version: 2.7 Dienstag , 26.
Dataset GUID: d69fe197-10e7-401a-89ae-c39b5f7a5a61
Collection: M-Fungi
Export file: C:\Daten\DiversityWorkbench 2.0\DiversityCollection\bin\Debug\XmlExportABCD_26_08_2008.XML

To start the export click on the **Start export** button. The data will be exported into a file in your application directory. Click on the 📂button to inspect the exported data (see below).

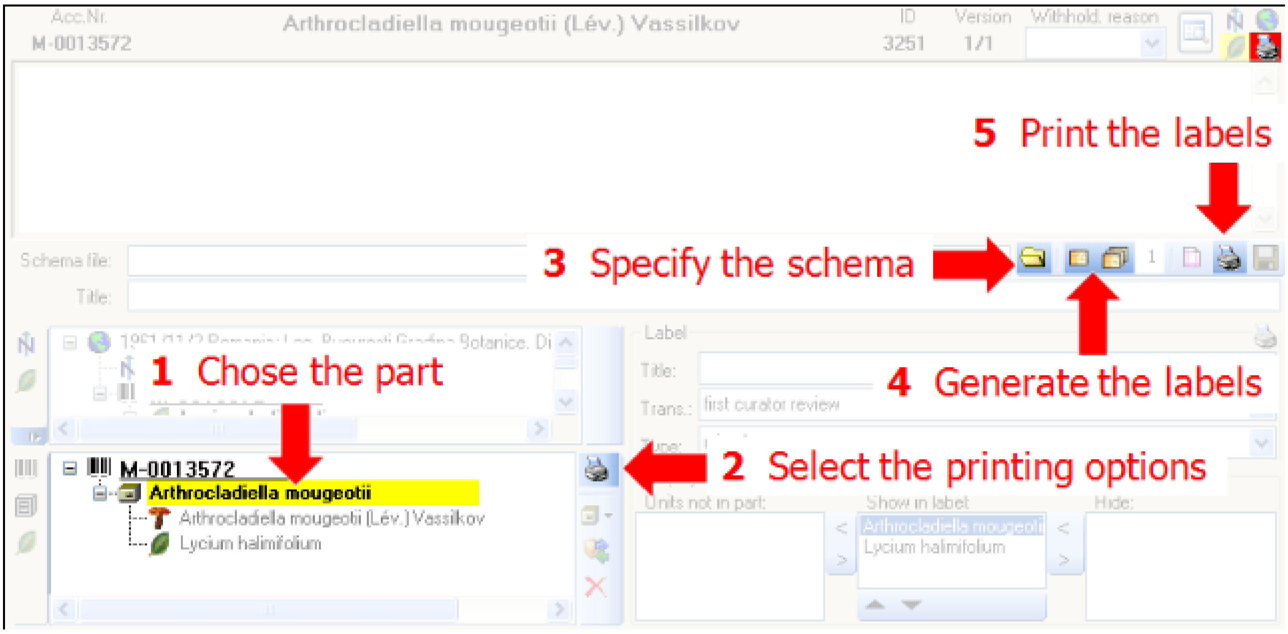


file:///C:/Daten/DiversityWorkbench 2.0/DiversityCollection/bin/Debug/XmlExportABCD_26.08.2008.XML

```
  <?xml version="1.0" encoding="utf-16" ?>
- <Datasets>
  - <Dataset>
      <DatasetGUID>d69fe197-10e7-401a-89ae-c39b5f7a5a61</DatasetGUID>
      <TechnicalContact>webmaster@somewhere.net</TechnicalContact>
    - <Metadata>
        <IconURI>http://www.botanischestaatssammlung.de/grafik/bslogo.jpg</IconURI>
        <Scope>Fungi</Scope>
        <Version>2.7, 26.08.2008</Version>
      </Metadata>
    - <OriginalSource>
        <SourceInstitutionCode>Botanische Staatssammlung
          München</SourceInstitutionCode>
        <SourceInstitutionID>Botanische Staatssammlung München</SourceInstitutionID>
      </OriginalSource>
    - <Units>
      - <Unit>
          <UnitGUID>URN:catalog:M:M-Fungi:2507</UnitGUID>
          <SourceInstitutionID>Botanische Staatssammlung
            München</SourceInstitutionID>
          <UnitID>2507</UnitID>
          <UnitIDNumeric>2507</UnitIDNumeric>
```

Label

If there is only one part in your specimen click on the printer symbol in the button to switch to the printing mode. If your specimen contains more then one part, choose the part of the specimen for which the label should be generated and click on the button in the right panel. The image area will switch to the label view and in the data area the details related to the label will be accessible. The sequence is shown in the image below.



Acc.Nr.: M-0013572

Arthrocladiella mougeotii (Lév.) Vassilkov

ID: 3251

Version: 1/1

Withhold. reason:

Schema file:

Title:

M-0013572

Arthrocladiella mougeotii

Arthrocladiella mougeotii (Lév.) Vassilkov

Lycium halimifolium

Label

Title:

Trans.: first curator review

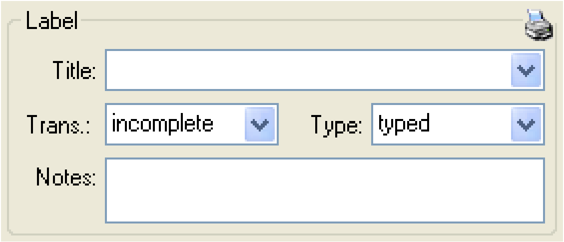
Type:

Units not in part:

Show in label: Arthrocladiella mougeotii, Lycium halimifolium

Hide:

Additional information about a label are entered in the label section (see image below). The data are stored in the table CollectionSpecimen.



Label

Title:

Trans.: incomplete

Type: typed

Notes:

The organisms of a specimen are printed on a label according to the display order.

To print a label for a specimen you have to select a schema file. There are default schema files available in the folder **LabelPrinting/Schemas** in your application directory. Click on the button to open the directory. You will find several prepared schema files among which you can choose resp. change them to your own needs or create new ones. The schema file **LabelTemplates.xslt** provides templates for the other schema files. You may give a title for the print in the field Title. From the Collection and MaterialCategory available for the selected specimen choose one from the list (**Coll./Mat.**). To generate the label for the current specimen click on the button. To generate labels for all specimens in your query click on the button. If you need duplicates of your labels change the number in the duplicates box 3 to the desired value. You can print 1 - 99 duplicates of one label. If there are more than 20 specimens in the list, you get a warning whether you really want to create all these labels, as this could be somewhat time consuming. The labels are generated as XML files with

XSLT-schema files, transformed to HTML-files and depicted in a browser. To print the label click on the 🖨 button.

Botanische Staatssammlung München   Nr. M-0013663

***Blumeria graminis* (DC.) Speer**

LATVIA. Lettland, Prov. Vidzeme, Kr. Riga: Ogre auf dem Felde.
On *Triticum sativum* .
1936/ 7/ 19   leg.: Smarods, J.
det.: Smarods, J.

M-0013663

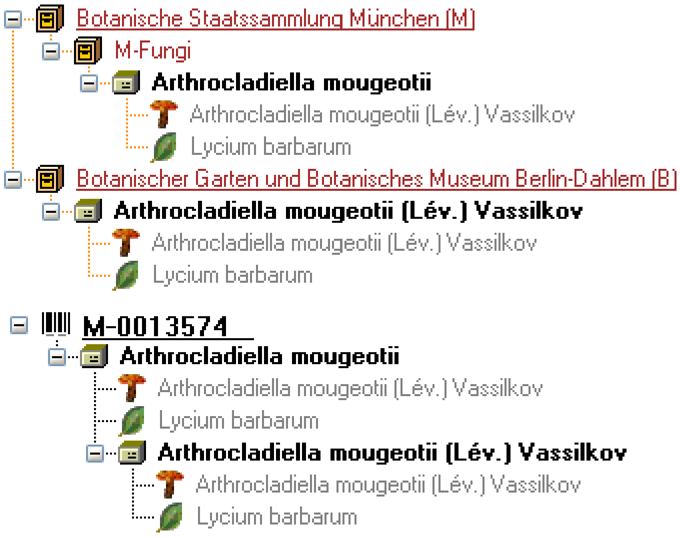
Schema file: Label.xslt

Title:

☐ Regard stock for duplicates

Restrict to collection: M-Fungi ☐ Restrict to material: specimen ☐

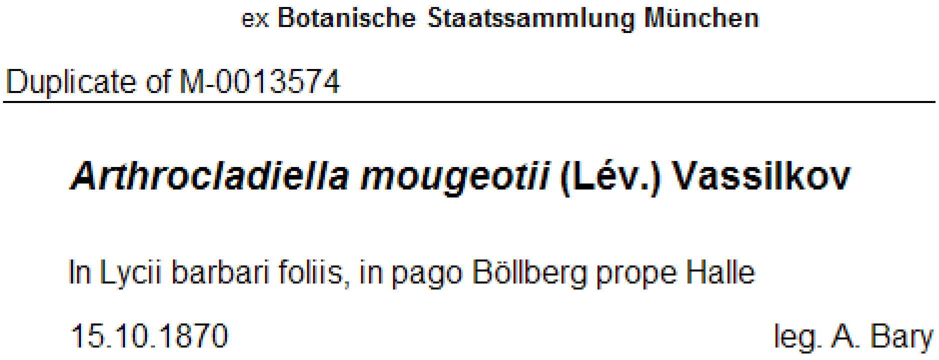
If you want to print labels for duplicates that are stored in a different collection, the duplicate should be a child of the original specimen as shown in the example below.



- Botanische Staatssammlung München (M)
  - M-Fungi
    - **Arthrocladiella mougeotii**
      - Arthrocladiella mougeotii (Lév.) Vassilkov
      - Lycium barbarum
- Botanischer Garten und Botanisches Museum Berlin-Dahlem (B)
  - **Arthrocladiella mougeotii (Lév.) Vassilkov**
    - Arthrocladiella mougeotii (Lév.) Vassilkov
    - Lycium barbarum

- **M-0013574**
  - **Arthrocladiella mougeotii**
    - Arthrocladiella mougeotii (Lév.) Vassilkov
    - Lycium barbarum
    - **Arthrocladiella mougeotii (Lév.) Vassilkov**
      - Arthrocladiella mougeotii (Lév.) Vassilkov
      - Lycium barbarum

IDepending on the schema you use, the label will be marked as duplicat and contain a reference to the original specimen (see below).



ex **Botanische Staatssammlung München**

Duplicate of M-0013574

***Arthrocladiella mougeotii* (Lév.) Vassilkov**

In Lycii barbari foliis, in pago Böllberg prope Halle

15.10.1870   leg. A. Bary

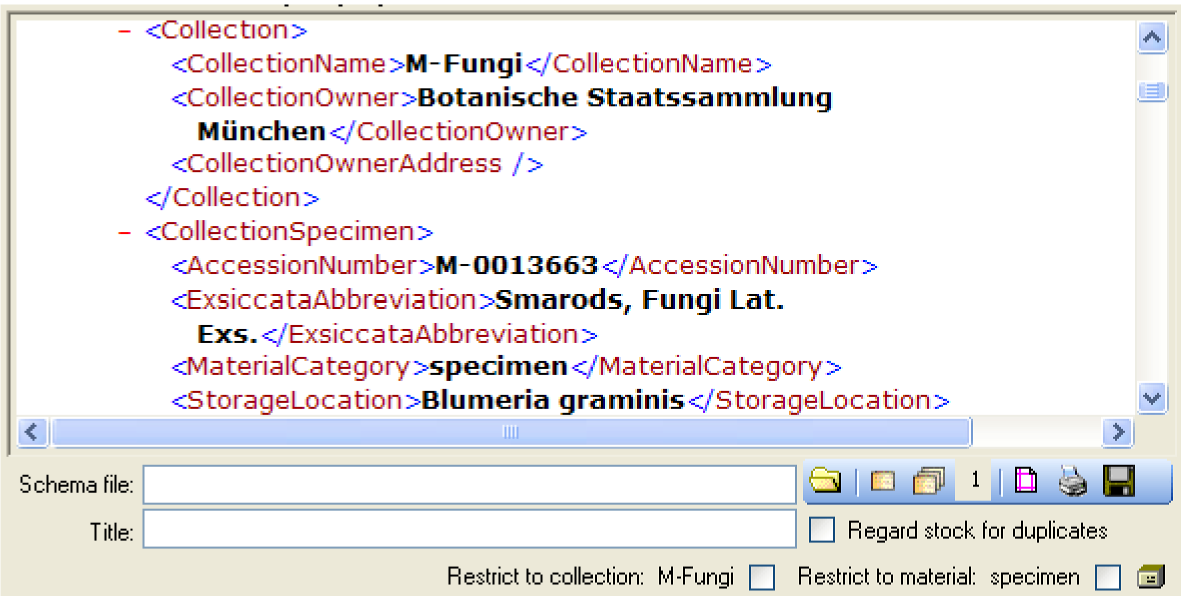
If you want to save the generated files for later printing click on the 💾 button to do this.

Note that the program will by default create a file **Label.xml** and in case a schema file is specified a file **Label.htm** in the **LabelPrinting** directory that will be overwritten everytime you generate a new label. So you have to save the file under a different name or in a different directory to prevent the program to erase these data.

If you use **Code 39** for your labels and want to print the barecodes on the labels you need the font code39.ttf , which is included in the DiversityCollection packet. Place this font in the folder where your fonts are stored (e.g.: C:\WINNT\Fonts). If the font is not available, the Barcode will appear as the accession number between two '*' signs.

If you want to print labels for all the specimens in the specimen list you can restrict these to the collection and the material category of the current specimen part (see image above).

If you do not select a schema file, i.e. the textbox **Schema file:** is empty, you will see the generated XML-file as shown in the image below. The XML file is the base for all label types you want to generate. To create your own labels just design your own XSLT-schema file. See e.g. http://www.w3.org/TR/xslt for further informations about schema files.



```
- <Collection>
    <CollectionName>M-Fungi</CollectionName>
    <CollectionOwner>Botanische Staatssammlung
      München</CollectionOwner>
    <CollectionOwnerAddress />
  </Collection>
- <CollectionSpecimen>
    <AccessionNumber>M-0013663</AccessionNumber>
    <ExsiccataAbbreviation>Smarods, Fungi Lat.
      Exs.</ExsiccataAbbreviation>
    <MaterialCategory>specimen</MaterialCategory>
    <StorageLocation>Blumeria graminis</StorageLocation>
```

Schema file:

Title:

☐ Regard stock for duplicates

Restrict to collection: M-Fungi ☐ Restrict to material: specimen ☐

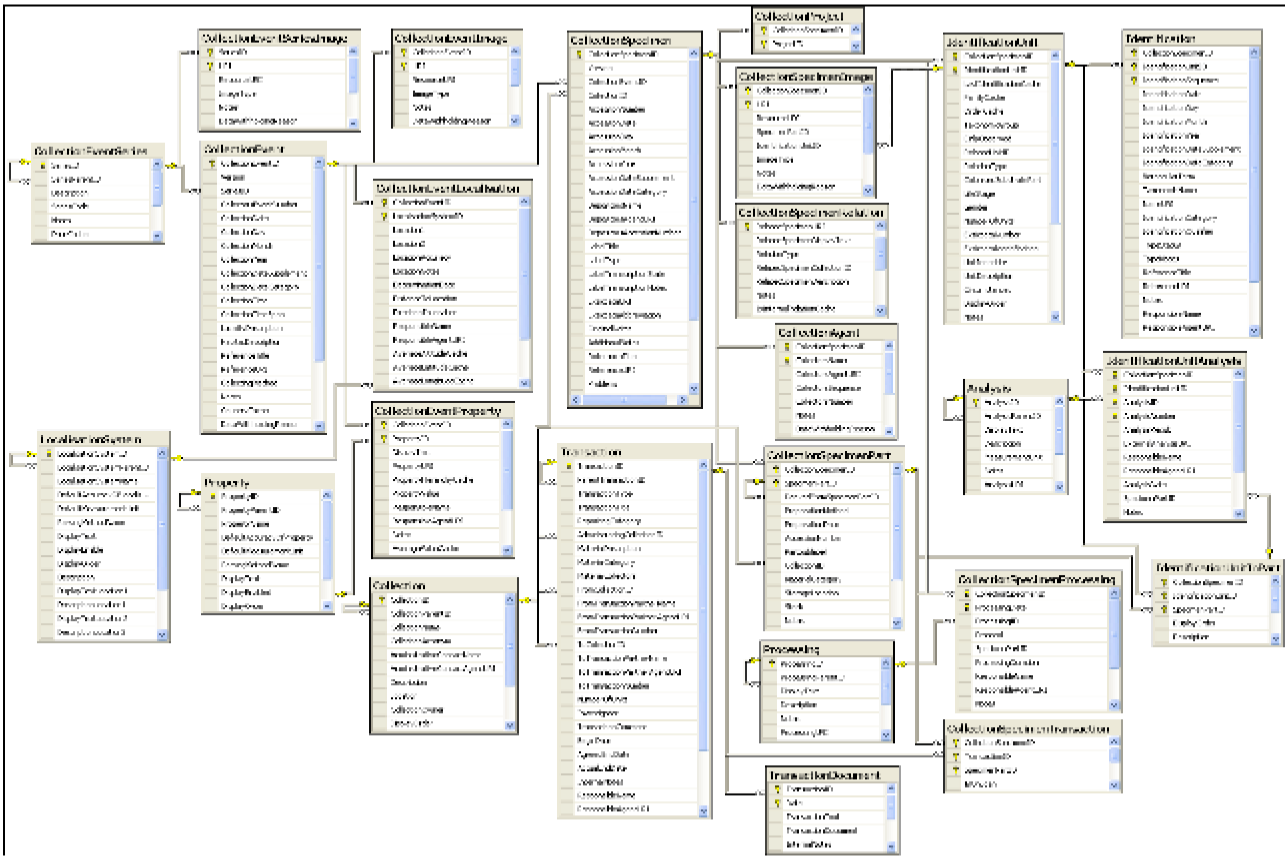
Database

The database for DiversityCollection is based on Microsoft SQL-Server 2005.

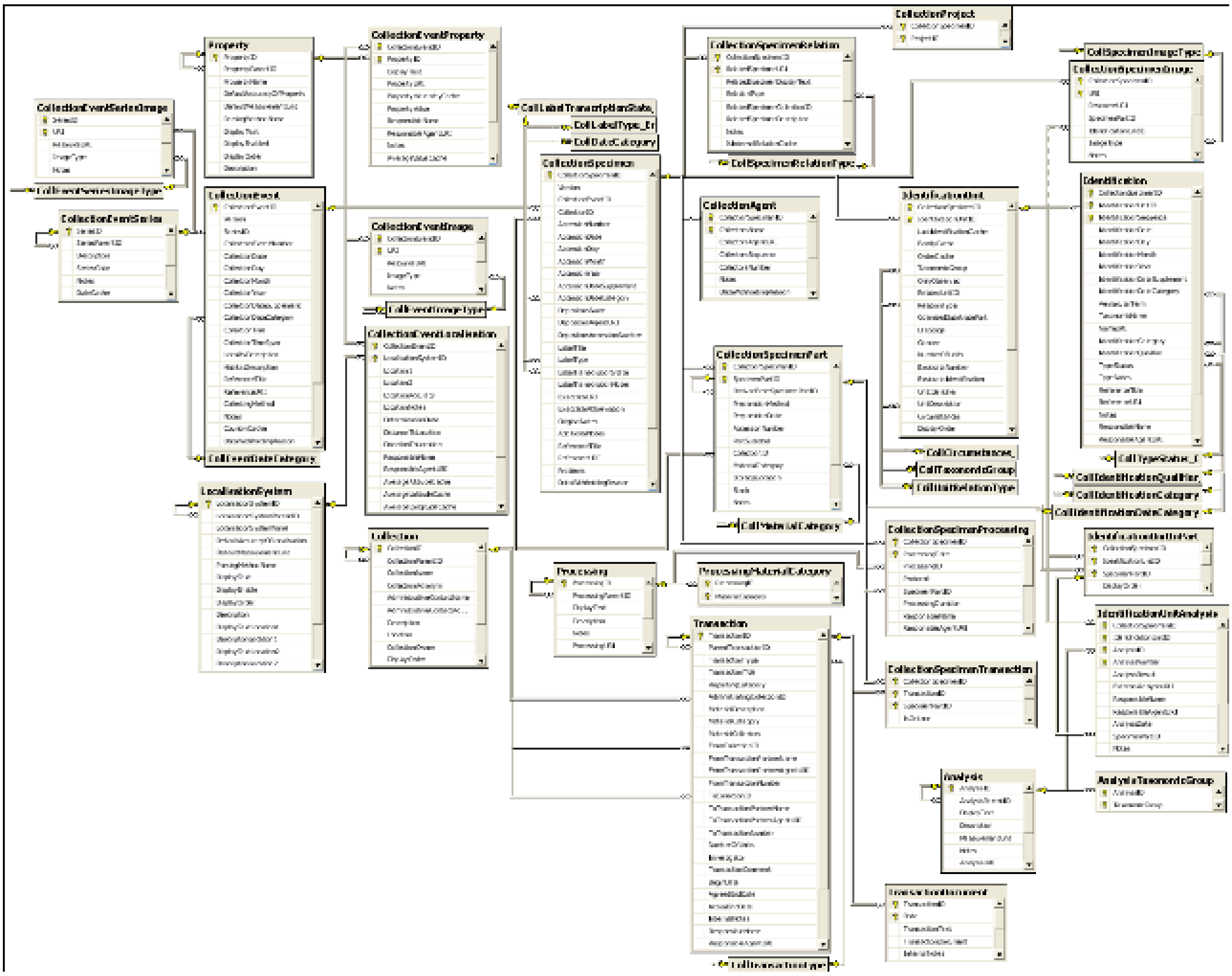
Organisation of the data

The main tables of the database are CollectionEvent corresponding to the event of the collection and CollectionSpecimen holding the specimens collected. Connected to these tables you find tables for additional informations.

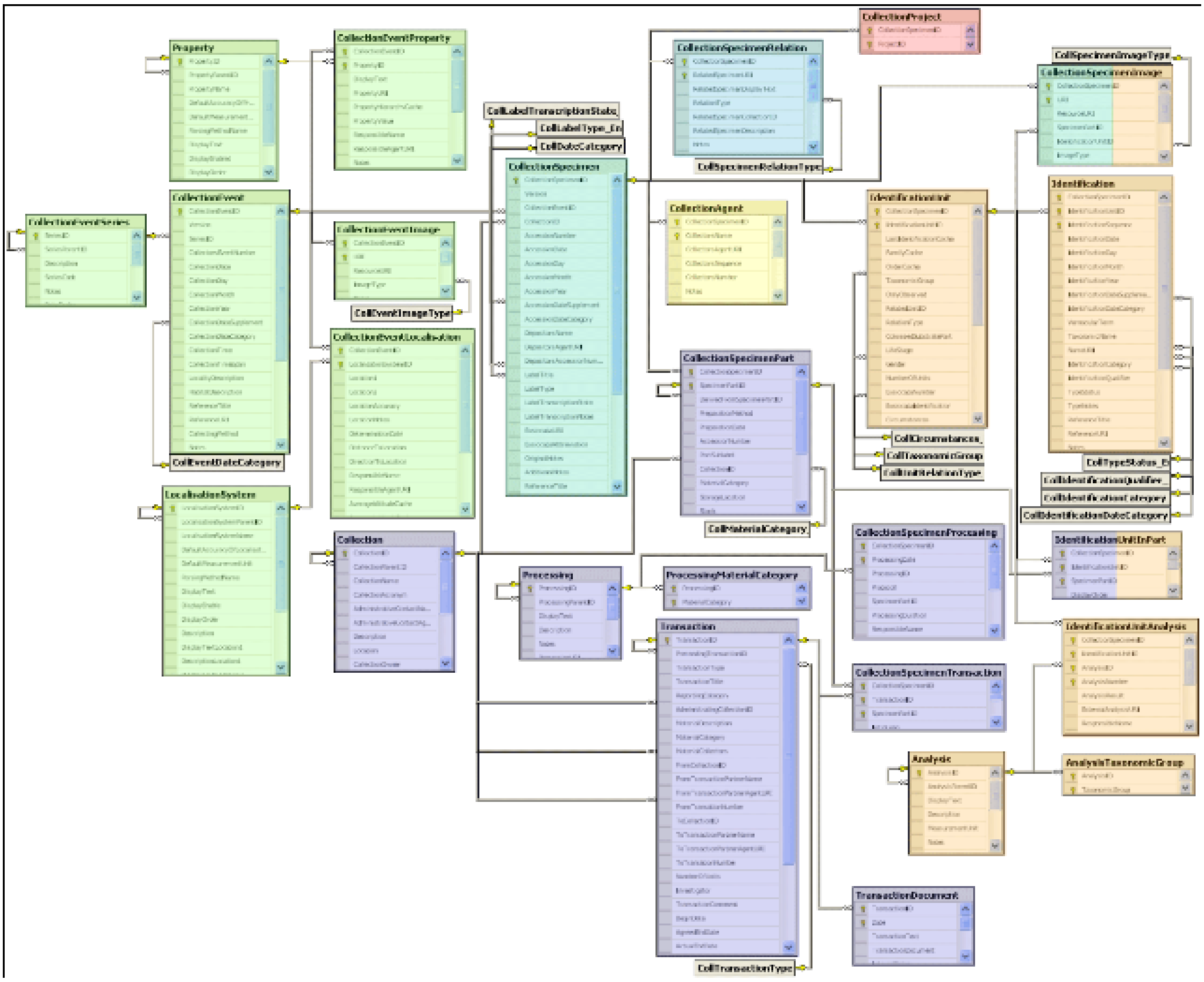
The image below shows the main tables of the database.



The structure of the whole database is shown in the image below.



In the graphic below the tables of the database are marked according to their logical groups. The central is the table CollectionSpecimen holding the data of the specimen like e.g. the accession number. In the left part you find the tables containing data related to the collection event, and in the right part tables related to the organisms and their identifications. Further logical groups are relation, collectors, projects and storage.



For details about the tables see the table groups about analysis, event, exchange, geography, identification, specimen, storage.

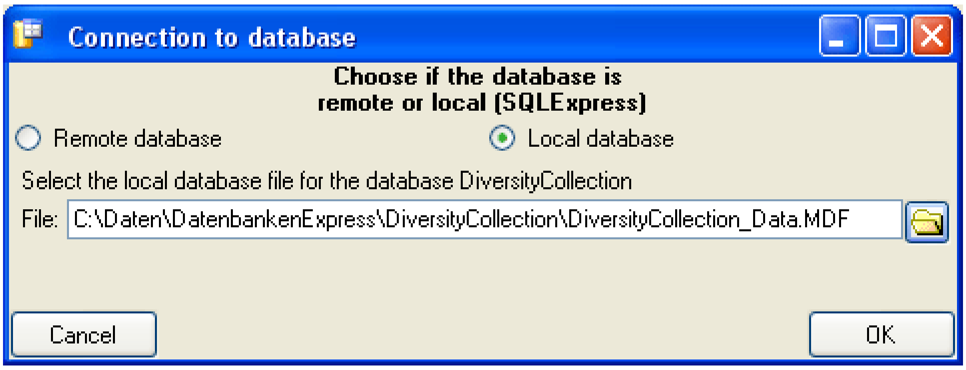
Further details: application tables, access.

Database - access

The database engine for DiversityCollection is Microsoft SQL-Server 2005.

If you are connected to a database this is indicated by the icon of the connection button in left upper corner. If you are not connected this will be indicated by the icon ☒. To access any database, you must specify the server where the database is located. For the configuration of this connection choose **Connection**, **Database...** from the menu or click on the button.

If you want to use a database on your local computer (SQL Server Express), start the program DiversityCollection.exe and in the main window click on the ☒button or choose **Connection -> Database ...** from the menu. A window as shown below will open. Here choose the option **Local database** and select the database file in your directory.



Connection to database

Choose if the database is remote or local (SQLExpress)

○ Remote database ● Local database

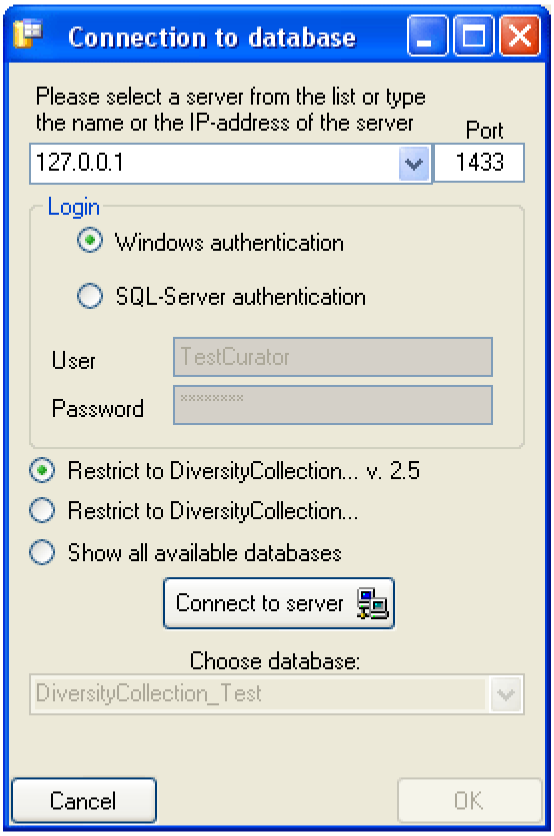
Select the local database file for the database DiversityCollection

File: C:\Daten\DatenbankenExpress\DiversityCollection\DiversityCollection_Data.MDF

If you want to use a database on a central server or remote computer choose the option **Remote database** and set the connection parameters as described below.

Database name, IP-address and Port

A dialog will open, to specify the name or IP-address and port number of the server and to select the authentication mode. You can either choose Windows authentication (see left image below) or SQL-Server authentication (see below - central middle image).



Connection to database

Please select a server from the list or type the name or the IP-address of the server

Port

127.0.0.1 | 1433

Login

● Windows authentication

○ SQL-Server authentication

User: TestCurator

Password: ********

● Restrict to DiversityCollection... v. 2.5

○ Restrict to DiversityCollection...

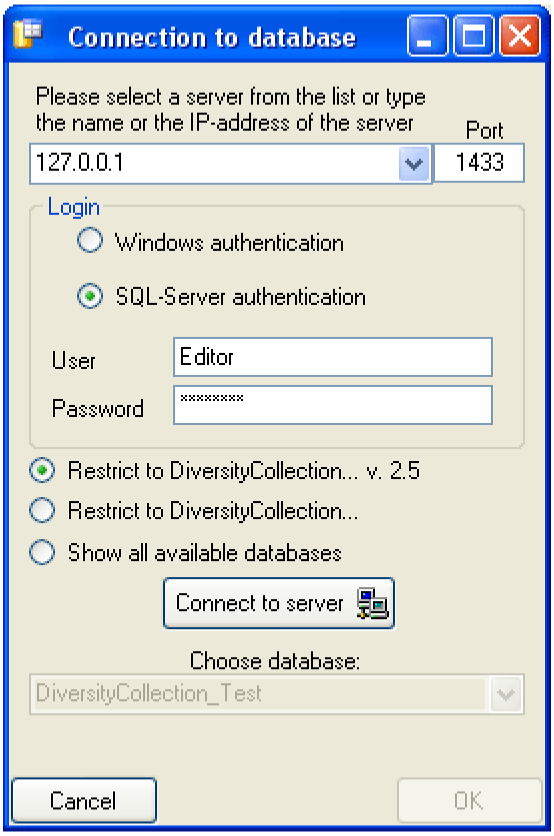
○ Show all available databases

Connect to server

Choose database:

DiversityCollection_Test

Cancel | OK



Connection to database

Please select a server from the list or type the name or the IP-address of the server

Port

127.0.0.1 | 1433

Login

○ Windows authentication

● SQL-Server authentication

User: Editor

Password: ********

● Restrict to DiversityCollection... v. 2.5

○ Restrict to DiversityCollection...

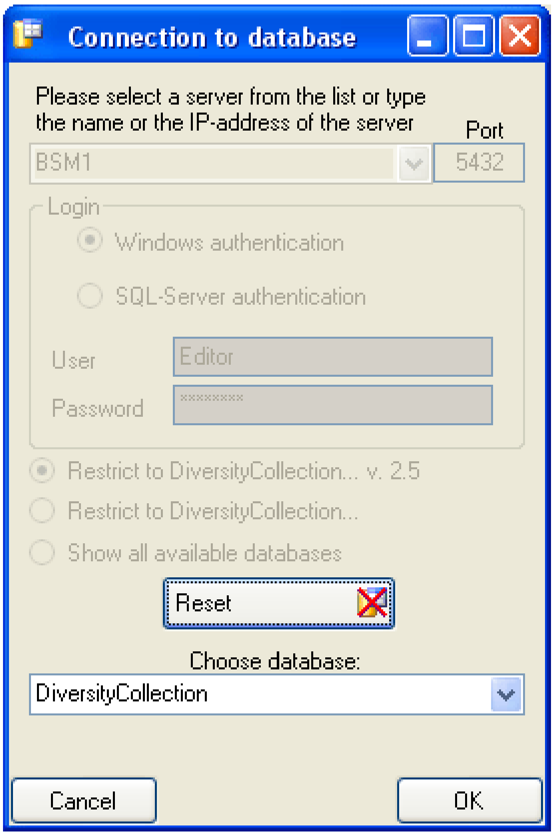
○ Show all available databases

Connect to server

Choose database:

DiversityCollection_Test

Cancel | OK



Connection to database

Please select a server from the list or type the name or the IP-address of the server

Port

BSM1 | 5432

Login

● Windows authentication

○ SQL-Server authentication

User: Editor

Password: ********

● Restrict to DiversityCollection... v. 2.5

○ Restrict to DiversityCollection...

○ Show all available databases

Reset

Choose database:

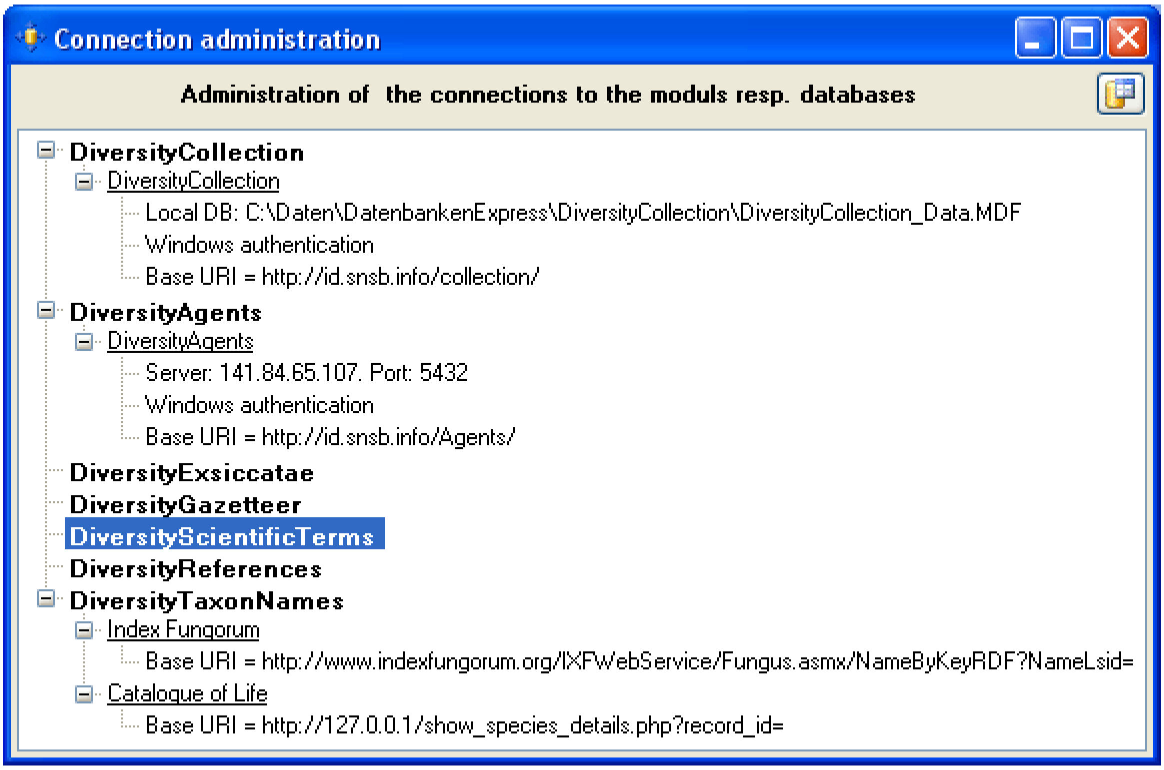
DiversityCollection

Cancel | OK

The standard port number for SQL-Server is 1433 and will be set as a default. If the database server is configured using a port different from that port, you must give the port number in the field Port. Click on the Connect to server button to connect to the server. If the connection informations are valid, you can choose a database from the server from the combobox at the base of the window (see right image above). To restart the connecting process click on the Reset button.

Module connections

The program will automatically try to get connection to all the modules within the Diversity Workbench. To edit these connections choose Connection - Module connections ... from the menu. A form as shown below will open, where you can edit these connections.



- DiversityCollection
  - DiversityCollection
    - Local DB: C:\Daten\DatenbankenExpress\DiversityCollection\DiversityCollection_Data.MDF
    - Windows authentication
    - Base URI = http://id.snsb.info/collection/
- DiversityAgents
  - DiversityAgents
    - Server: 141.84.65.107. Port: 5432
    - Windows authentication
    - Base URI = http://id.snsb.info/Agents/
- DiversityExsiccatae
- DiversityGazetteer
- DiversityScientificTerms
- DiversityReferences
- DiversityTaxonNames
  - Index Fungorum
    - Base URI = http://www.indexfungorum.org/IXFWebService/Fungus.asmx/NameByKeyRDF?NameLsid=
  - Catalogue of Life
    - Base URI = http://127.0.0.1/show_species_details.php?record_id=

To edit a connection, select it in the tree and click on the button.

Index

- ProcessingMaterialCategory
- Transaction
- TransactionDocument

Table Analysis

Analysis types used within the database

Column	Data type	Description
AnalysisID	int	ID of the analysis (Primary key)
AnalysisParentID	int	Analysis ID of the parent analysis if it belongs to a certain type documented in this table
DisplayText	nvarchar (50)	Name of the analysis as e.g. shown in user interface
Description	nvarchar (MAX)	Description of the analysis
MeasurementUnit	nvarchar (50)	The measurement unit used for the analysis, e.g. mm, µmol, kg
Notes	nvarchar (MAX)	Notes concerning this analysis
AnalysisURI	varchar (255)	URI referring to an external documentation of the analysis
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table AnalysisTaxonomicGroup

The types of analysis that are available for a taxonomic group

Column	Data type	Description
AnalysisID	int	Analysis ID, foreign key of table Analysis.
TaxonomicGroup	nvarchar (50)	Taxonomic group the organism identified by this unit belongs to. Groups listed in table

		CollTaxonomicGroup_Enum (= foreign key)
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table Collection

The collections where the specimen are stored

Column	Data type	Description
CollectionID	int	Unique reference ID for the collection (= Primary key)
CollectionParentID	int	For a subcollection within another collection: CollectionID of the collection to which the subcollection belongs. Empty for an independent collection
CollectionName	nvarchar (255)	Name of the collection (e. g. 'Herbarium Kew') or subcollection (e. g. 'cone collection', 'alcohol preservations'). This text should be kept relatively short, use Description for additional information
CollectionAcronym	nvarchar (10)	A unique code for the Collection, e.g. the herbarium code from Index Herbariorum
AdministrativeContactName	nvarchar (500)	The name of the person or organisation responsible for this collection
AdministrativeContactAgentURI	varchar (255)	The URI of the person or organisation responsible for the Collection e.g. as provided by the module DiversityAgents
Description	nvarchar (MAX)	A short description of the collection
Location	nvarchar (255)	Optionally location of the collection, e.g. the number within a file system or a description of the room(s) housing the (sub)collection
CollectionOwner	nvarchar (255)	The owner of the collection as e.g. printed on a label, should be given if CollectionParentID is null
DisplayOrder	smallint	The order in which the entries are displayed. The order may

		be changed at any time, but all values must be unique.
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionAgent

The collector(s) of collection specimens

Column	Data type	Description
CollectionSpecimenID	int	Refers to ID of CollectionEvent (= Foreign key and part of primary key)
CollectorsName	nvarchar (255)	Name of the Collector
CollectorsAgentURI	varchar (255)	The URI of the Agent, e.g. as stored within the module DiversityAgents
CollectorsSequence	datetime	The order of collectors in a team. Automatically set by the database system *Default value: getdate()*
CollectorsNumber	nvarchar (50)	Number assigned to a specimen or a batch of specimens by the collector during the collection event (= 'field number')
Notes	nvarchar (MAX)	Notes about the collector, e.g. if the name is uncertain
DataWithholdingReason	nvarchar (255)	If the dataset is withhold, the reason for withholding the data, otherwise null
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionEvent

The collection event where the specimen was collected

Column	Data type	Description
CollectionEventID	int	Unique ID for the collection event (= Primary key)
Version	int	The version of the dataset. Automatically set by the system. *Default value: (1)*
SeriesID	int	The ID of the related expedition. Relates to the PK of the table CollectionExpedition (Foreign key).
CollectorsEventNumber	nvarchar (50)	Number assigned to a collection event by the collector (= 'field number')
CollectionDate	datetime	The date of the event calulated from the entries in CollectionDay, -Month and -Year.
CollectionDay	tinyint	The day of the date of the event or when the collection event started
CollectionMonth	tinyint	The month of the date of the event or when the collection event started
CollectionYear	smallint	The year of the date of the event or when the collection event started
CollectionDateSupplement	nvarchar (100)	Verbal or additional collection date information, e.g. 'end of summer 1985', 'first quarter', '1888-1892'. The end date if the collection event comprises a period. The time of the event if necessary.
CollectionDateCategory	nvarchar (50)	Category of the date of the identification e.g. "system", "estimated" (= foreign key, see in table CollEventDateCategory_Enum)
CollectionTime	varchar (50)	The time of the event or when the collection event started
CollectionTimeSpan	varchar (50)	The time span e.g. in seconds of the collection event
LocalityDescription	nvarchar (MAX)	Locality description of the locality, exactly as written on the original label (i.e. without

		corrections during data entry)
HabitatDescription	nvarchar (MAX)	Geo-ecological description of the locality, exactly as written on the original label (i.e. without corrections during data entry)
ReferenceTitle	nvarchar (255)	The title of the publication where the collection event was published. Note this is only a cached value where ReferenceURI is present
ReferenceURI	varchar (255)	URI (e.g. LSID) of the source publication where the collection event is published, may e.g. refer to the module DiversityReferences
CollectingMethod	nvarchar (MAX)	Description of the method used for collecting the samples, e.g. traps, moist chambers, drag net
Notes	nvarchar (MAX)	Notes about the collection event
CountryCache	nvarchar (50)	The country where the collection event took place. Cached value derived from an entry in CollectionGeography
DataWithholdingReason	nvarchar (255)	If the dataset is withhold, the reason for withholding the data, otherwise null
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionEventImage

The images showing the site of the collection event

Column	Data type	Description
CollectionEventID	int	Unique ID for the collection event (= Primary key)
URI	varchar (255)	The complete URI address of the image. This is only a cached value if ResourceID is available referring to the module DiversityResources

ResourceURI	varchar (255)	The URI of the resource (e.g. see module DiversityResources)
ImageType	nvarchar (50)	Type of the image, e.g. map
Notes	nvarchar (MAX)	Notes to this image concerning the collection event
DataWithholdingReason	nvarchar (255)	If the dataset is withhold, the reason for withholding the data, otherwise null
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionEventLocalisation

The geographic localisation of a collection event

Column	Data type	Description
CollectionEventID	int	Refers to the ID of CollectionEvent (= Foreign key and part of primary key)
LocalisationSystemID	int	Refers to the ID of LocalisationSystem (= Foreign key and part of primary key)
Location1	nvarchar (255)	Either a named location selected from a thesaurus (e. g. 'Germany, Bavaria, Kleindingharting') or altitude range or other values (e. g. 100-200 m)
Location2	nvarchar (255)	Corresponding value to Location1 e.g. ID or URI of gazetteer or thesaurus
LocationAccuracy	nvarchar (50)	The accuracy of the determination of this locality
LocationNotes	nvarchar (MAX)	Notes on the location
DeterminationDate	smalldatetime	Date of the determination of the geographical localisation
DistanceToLocation	varchar (50)	Distance from the specified place to the real location of the collection event (m)
DirectionToLocation	varchar (50)	Direction from the specified place to the real location of

		the collection event (Degrees rel. to north)
ResponsibleName	nvarchar (255)	The name of the agent (person or organization) responsible for this entry. *Default value: [dbo].[CurrentUserName]()*
ResponsibleAgentURI	varchar (255)	URI of the person or organisation responsible for the data (see e.g. module DiversityAgents)
AverageAltitudeCache	real	Calculated altitude as parsed from the location fields
AverageLatitudeCache	real	Calculated latitude as parsed from the location fields
AverageLongitudeCache	real	Calculated longitude as parsed from the location fields
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionEventProperty

A property of a collection site, e.g. exposition, slope, vegetation. May refer to Diversity Workbench module DiversityScientificTerms

Column	Data type	Description
CollectionEventID	int	Refers to the ID of CollectionEvent (= Foreign key and part of primary key)
PropertyID	int	The ID of the descriptor of the collection event, foreign key, see table Descriptor
DisplayText	nvarchar (255)	The text for the property as shown e.g. in a user interface
PropertyURI	varchar (255)	URI referring to an external datasource e.g. DiversityTerminology
PropertyHierarchyCache	nvarchar (MAX)	A cached text of the complete name of the descriptor including superior categories if present
PropertyValue	nvarchar (255)	The value of a captured feature e.g. temperature, pH,

		vegetation etc. If there is a range this is the lower or first value
ResponsibleName	nvarchar (255)	The name of the agent (person or organization) responsible for this entry. *Default value: [dbo].[CurrentUserName]()*
ResponsibleAgentURI	varchar (255)	URI of the person or organisation responsible for the data (see e.g. module DiversityAgents)
Notes	nvarchar (MAX)	Notes about the property of the colletion site.
AverageValueCache	float	For numeric values - a cached average value according to the
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionEventSeries

The series whithin which collection events take place

Column	**Data type**	**Description**
SeriesID	int	Primary key. The ID for this expedition (= Primary key)
SeriesParentID	int	The ID of the superior expedition
Description	nvarchar (MAX)	The description of the expedition as it will be printed on e.g. the label
SeriesCode	nvarchar (50)	The user defined code for an expedition
Notes	nvarchar (MAX)	Notes about this expedition
DateCache	datetime	The first date of the depending events, used for sorting the expeditions [controlled by the database]
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset

		Default value: user_name()
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionEventSeriesImage

The images showing the site of the collection event series

Column	Data type	Description
SeriesID	int	Unique ID for the collection event series (= Foreign key and part of primary key)
URI	varchar (255)	The complete URI address of the image. This is only a cached value if ResourceID is available referring to the module DiversityResources
ResourceURI	varchar (255)	The URI of the resource (e.g. see module DiversityResources)
ImageType	nvarchar (50)	Type of the image, e.g. map
Notes	nvarchar (MAX)	Notes to this image concerning the collection event
DataWithholdingReason	nvarchar (255)	If the dataset is withhold, the reason for withholding the data, otherwise null
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionManager

Managers within DiversityCollection, responsible of specimen transactions

Column	Data type	Description
LoginName	nvarchar (50)	A login name which the user uses for access the

		DivesityWorkbench, Microsoft domains, etc..
AdministratingCollectionID	int	ID for the collection for which the Manager has the right to administrate the transaction. Corresponds to AdministratingCollectionID in table Transaction.

Table CollectionProject

The projects within which the collection specimen were placed

Column	Data type	Description
CollectionSpecimenID	int	Refers to the ID of CollectionSpecimen (= Foreign key and part of primary key)
ProjectID	int	ID of the project to which the specimen belongs (Projects are defined in DiversityProjects)
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionRequester

Requesters within DiversityCollection, responsible of specimen transactions

Column	Data type	Description
LoginName	nvarchar (50)	A login name which the user uses for access to the DivesityWorkbench, Microsoft domains, etc..
AdministratingCollectionID	int	ID for the collection for which the Requester has the right to request specimen. Corresponds to AdministratingCollectionID in table Transaction.
IncludeSubcollections	bit	If the subcollections of the administrating collection are accessible for a request

Table CollectionSpecimen

The data directly attributed to the collection specimen

Column	Data type	Description
CollectionSpecimenID	int	Unique reference ID for the collection specimen record (primary key)
Version	int	The version of the dataset *Default value: (1)*
CollectionEventID	int	Refers to the ID of CollectionEvent (= Foreign key and part of primary key)
CollectionID	int	ID of the Collection as stored in table Collection (= foreign key, see table Collection)
AccessionNumber	nvarchar (50)	Accession number of the specimen within the collection, e.g. "M-29834752"
AccessionDate	datetime	The date of the accession calculated from the entries in AccessionDay, -Month and -Year
AccessionDay	tinyint	The day of the date when the specimen was acquired in the collection
AccessionMonth	tinyint	The month of the date when the specimen was acquired in the collection
AccessionYear	smallint	The year of the date when the specimen was acquired in the collection
AccessionDateSupplement	nvarchar (255)	Verbal or additional accession date information, e.g. 'end of summer 1985', 'first quarter', '1888-1892'
AccessionDateCategory	nvarchar (50)	Category of the date of the identification e.g. "system", "estimated" (= foreign key, see in table xColl_DateCategory_Enum)
DepositorsName	nvarchar (255)	The name of the depositor(s) (person or organization responsible for deposition). Where entire collections are deposited, this should also contain the collection name (e.g. 'Herbarium P. Döbbler')
DepositorsAgentURI	varchar (255)	The URI of the depositor(s) (person or organization responsible for deposition)
DepositorsAccessionNumber	nvarchar (50)	Accession number of the

		specimen within the previous or original collection, e.g. 'D-23948'
LabelTitle	nvarchar (255)	The title of the label e.g. for printing labels.
LabelType	nvarchar (50)	Printed, typewritten, typewritten with handwriting added, entirely in handwriting, etc.
LabelTranscriptionState	nvarchar (50)	The state of the transcription of a label into the database: 'Not started', 'incomplete', 'complete'
LabelTranscriptionNotes	nvarchar (255)	User defined notes concerning the transcription of the label into the database
ExsiccataURI	varchar (255)	If specimen is an exsiccata: The URI of the Exsiccata series, e.g. as stored within the DiversityExsiccata module
ExsiccataAbbreviation	nvarchar (255)	If specimen is an exsiccata: Standard abbreviation of the exsiccata (not necessarily a unique identifier; editors or publication places may change over time)
OriginalNotes	nvarchar (MAX)	Notes found on the label of the specimen, by the original collector or from a later revision
AdditionalNotes	nvarchar (MAX)	Additional notes made by the editor of the specimen record, e. g. 'doubtful identification/locality'
ReferenceTitle	nvarchar (255)	The title of the publication where the specimen was published. Note this is only a cached value where ReferenceURI is present
ReferenceURI	varchar (255)	URI (e.g. LSID) of reference where specimen is published, e.g. referring to the module DiversityReferences
Problems	nvarchar (255)	Description of a problem that occurred during data editing. Typically these entries should be deleted after help has been obtained. Do not enter scientific problems here; use AdditionalNotes for such permanent problems!
DataWithholdingReason	nvarchar (255)	If the dataset is withhold, the reason for withholding the data, otherwise null
LogCreatedWhen	datetime	The time when this dataset

		was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionSpecimenImage

The images of a collection specimen or of an identification unit within this specimen

Column	Data type	Description
CollectionSpecimenID	int	Refers to the ID of CollectionSpecimen (= Foreign key and part of primary key)
URI	varchar (255)	The complete URI address of the image. This is only a cached value if ResourceID is available referring to the module DiversityResources
ResourceURI	varchar (255)	The URI of the image, e.g. as stored in the module DiversityResources.
SpecimenPartID	int	Optional: If the dataset is not related to a part of a specimen, the ID of a related part (= foreign key)
IdentificationUnitID	int	If image refers to only on out of several identification units for a specimen, refers to the ID of an IdentificationUnit for a CollectionSpecimen (= foreign key)
ImageType	nvarchar (50)	Type of the image, e.g. label
Notes	nvarchar (MAX)	Notes about the specimen image
DataWithholdingReason	nvarchar (255)	If the dataset is withhold, the reason for withholding the data, otherwise null
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*

LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table <u>CollectionSpecimenPart</u>

Parts of a collection specimen. Includes a possible hierarchy of the parts

Column	Data type	Description
<u>CollectionSpecimenID</u>	int	Refers to the ID of CollectionSpecimen (= Foreign key and part of primary key)
<u>SpecimenPartID</u>	int	ID for a part of a specimen (part of primary key) *Default value: (1)*
DerivedFromSpecimenPartID	int	SpecimenPartID of the specimen from which the current specimen is derived from
PreparationMethod	nvarchar (MAX)	The method used for the preparation of the part of the specimen, e.g. the inoculation method for cultures
PreparationDate	datetime	The date and time when the part was preparated e.g when it was separated from the source object
AccessionNumber	nvarchar (50)	Accession number of the part of the specimen within the collection if it is different from the accession number of the specimen as stored in the table CollectionSpecimen, e.g. "M-29834752"
PartSublabel	nvarchar (50)	The label for a part of a specimen, e.g. if duplicats of a specimen have a separate number
CollectionID	int	ID of the Collection as stored in table Collection (= foreign key, see table Collection)
MaterialCategory	nvarchar (50)	Material category of specimen. Examples: 'herbarium sheets', 'drawings', 'microscopic slides' etc. (= foreign key, see table CollMaterialCategory_Enum) *Default value: N'specimen'*
StorageLocation	nvarchar (255)	A code identifying the place where the specimen is stored within the collection. Frequently the accepted scientific name is used as storage location code.

Stock	tinyint	Number of stock units if the specimen is stored in separated units e.g. several boxes or vessels
Notes	nvarchar (MAX)	Notes concerning the storage of the sample
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionSpecimenProcessing

The processing that was applied to a collection specimen

Column	Data type	Description
CollectionSpecimenID	int	Refers to ID of CollectionSpecimen (= Foreign key and part of primary key)
ProcessingDate	datetime	Date and time of the start of the processing *Default value: getdate()*
ProcessingID	int	ID of the processing. Refers to ProcessingID in table Processing (foreign key) *Default value: (1)*
Protocoll	nvarchar (100)	The label of the processing protocoll
SpecimenPartID	int	Optional: If the dataset is related to a part of a specimen, the ID of a related part (= foreign key, see table CollectionSpecimenPart)
ProcessingDuration	varchar (50)	The duration of the processing in seconds
ResponsibleName	nvarchar (255)	Name of the person or institution responsible for the determination *Default value: [dbo].[CurrentUserName]()*
ResponsibleAgentURI	varchar (255)	URI of the person or institution responsible for the determination (= foreign key) as stored in the module DiversityAgents.

Notes	nvarchar (MAX)	Notes about the processing
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionSpecimenRelation

The relations of a collection specimen to other collection specimen

Column	Data type	Description
CollectionSpecimenID	int	Unique reference ID for the collection specimen record (primary key)
RelatedSpecimenURI	varchar (255)	URI of the related specimen
RelatedSpecimenDisplayText	varchar (255)	The name of a related specimen as shown e.g. in a user interface
RelationType	nvarchar (50)	Type of the relation between the specimen (= foreign key, see table CollRelationType_Enum)
RelatedSpecimenCollectionID	int	ID of the Collection as stored in table Collection (= foreign key, see table Collection)
RelatedSpecimenDescription	nvarchar (MAX)	Description of the related specimen
Notes	nvarchar (MAX)	Notes on the relation to the specimen
IsInternalRelationCache	bit	If the relation represents a connection between specimen in this database *Default value: (1)*
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table CollectionSpecimenTransaction

The transactions in which a specimen was involved

Column	Data type	Description
CollectionSpecimenID	int	Refers to ID of CollectionSpecimen (= Foreign key and part of primary key)
TransactionID	int	Unique ID for the transaction (= Foreign key and part of primary key)
SpecimenPartID	int	Optional: If the dataset is related to a part of a specimen, the ID of a related part (= foreign key, see table CollectionSpecimenPart)
IsOnLoan	bit	True if a specimen is on loan
LogInsertedBy	nvarchar (50)	Name of user who first entered (typed or imported) the data. *Default value: user_name()*
LogInsertedWhen	smalldatetime	Date and time when the data were first entered (typed or imported) into this database. *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Name of user who last updated the data. *Default value: user_name()*
LogUpdatedWhen	smalldatetime	Date and time when the data were last updated. *Default value: getdate()*

Table Identification

The identifications of the organisms within a specimen

Column	Data type	Description
CollectionSpecimenID	int	Refers to the ID of CollectionSpecimen (= Foreign key and part of primary key)
IdentificationUnitID	int	Refers to the ID of IdentficationUnit (= foreign key and part of primary key)
IdentificationSequence	smallint	The sequence of the identifications. The last identification (having the highest sequence) is regarded as valid *Default value: (1)*
IdentificationDate	datetime	The date of the identification

		calculated from the entries in IdentificationDay, -Month and -Year
IdentificationDay	tinyint	The day of the identification event
IdentificationMonth	tinyint	The month of the identification event
IdentificationYear	smallint	The year of the identification event. The year may be empty if only the day or month are known.
IdentificationDateSupplement	nvarchar (255)	Verbal or additional identification date information, e.g. 'end of summer 1985', 'first quarter', '1888-1892'
IdentificationDateCategory	nvarchar (50)	Category of the date of the identification e.g. "system", "estimated" (= foreign key, see in table CollDateCategory_Enum)
VernacularTerm	nvarchar (255)	Name or term other than a taxonomic (= scientific) name, e.g. 'pine', 'limestone', 'conifer', 'hardwood'
TaxonomicName	nvarchar (255)	Valid name of the species (including the taxonomic author where available. Example: 'Rosa canina L.'
NameURI	varchar (255)	The URI of the taxonomic name, e.g. as provided by the module DiversityTaxonNames.
IdentificationCategory	nvarchar (50)	Category of the identification e.g. 'determination', 'confirmation', 'absence' (= foreign key, see table CollIdentificationCategory_Enum)
IdentificationQualifier	nvarchar (50)	Qualification of the identification e.g. "cf."," aff.", "sp. nov." (= foreign key, see table CollIdentificationQualifier_Enum)
TypeStatus	nvarchar (50)	If identification unit is type of a taxonomic name: holotype, syntype, etc. (= foreign key, see table CollTypeStatus_Enum)
TypeNotes	nvarchar (MAX)	Notes concerning the typification of this specimen
ReferenceTitle	nvarchar (255)	Publications or authoritative opinions of scientist used during the identification process. Example: enter 'Schmeil-Fitschen 1995' if this

		field flora was used.
ReferenceURI	varchar (255)	The URI of the reference e.g. as provided by the module DiversityReferences
Notes	nvarchar (MAX)	User defined notes, e.g. the reason for a re-determination / change of the name, etc.
ResponsibleName	nvarchar (255)	Name of the person or institution responsible for the determination *Default value: [dbo].[CurrentUserName]()*
ResponsibleAgentURI	varchar (255)	URI of the person or institution responsible for the determination (= foreign key) as stored in the module DiversityAgents.
LogCreatedWhen	datetime	Date and time when the dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Login of the user who created the dataset *Default value: user_name()*
LogUpdatedWhen	datetime	Date and time when the dataset was changed *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Login of the user who changed the dataset *Default value: user_name()*

Table IdentificationUnit

Organism that is present in or on a collection specimen

Column	Data type	Description
CollectionSpecimenID	int	Refers to the ID of CollectionSpecimen (= Foreign key and part of primary key)
IdentificationUnitID	int	ID of the identification unit (= part of Primary key). Usually one of possibly several organisms present on the collection specimen. Example: parasite with hyperparasite on plant leaf = 3 units,
LastIdentificationCache	nvarchar (255)	The last identification as entered in table Identification
FamilyCache	nvarchar (255)	A cached value of the family of the taxon of the last identification. Can be set by the editor if NameURI in table Identification is NULL, otherwise set by the system.

OrderCache	nvarchar (255)	A cached value of the order of the taxon of the last identification. Can be set by the editor if NameURI in table Identification is NULL, otherwise set by the system.
TaxonomicGroup	nvarchar (50)	Taxonomic group the organism identified by this unit belongs to. Groups listed in table CollTaxonomicGroup_Enum (= foreign key)
OnlyObserved	bit	True if the organism was only observed rather than collected. It is therefore not present on the preserved specimen. Example: Tree under which the collected mycorrhizal fungus grew. *Default value: (0)*
RelatedUnitID	int	The IdentificationUnitID of the organism or substrate, on which this organism is growing (= foreign key)
RelationType	nvarchar (50)	The relation of an unit to its substrate, e.g. parasitism, symbiosis etc. as stored in CollRelationType_Enum (= foreign key)
ColonisedSubstratePart	nvarchar (255)	If a substrate association exists: part of the substrate that is affected in the interaction (e.g. 'leaves' if a fungus is growing on the leaves of an infected plant)
LifeStage	nvarchar (255)	Examples: 'II, III' for spore generations of rusts or 'seed', 'seedling' etc. for higher plants
Gender	nvarchar (50)	The gender of the identification unit, e.g. 'male'
NumberOfUnits	smallint	The number of units of this identification unit, e.g. 400 beetle in a bottle
ExsiccataNumber	nvarchar (50)	If specimen is an exsiccata: Number of current specimen within the exsiccata series
ExsiccataIdentification	smallint	Refers to the IdentificationSequence in Identification (= foreign key). The name under which the collection specimen resp. this unit is published within an exsiccate.
UnitIdentifier	nvarchar (50)	An identifier for the identification of the unit e.g. a number painted on a tree

		within an experimental plot
UnitDescription	nvarchar (50)	Description of the unit, esp. if not the an organism but parts or remnants of it were present or observed, e.g. a nest of an insect or a song of a bird
Circumstances	nvarchar (50)	Circumstances of the occurence of the organism
DisplayOrder	smallint	The sequence in which the units within this specimen will appear on e.g. a label where the first unit may be printed in the header and others in the text below. 0 means the unit should not appear on a label. *Default value: (1)*
Notes	nvarchar (MAX)	Further information on the identification unit or interaction, e. g. infection symptoms like 'producing galls'
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table IdentificationUnitAnalysis

The analysis values taken from an identification unit

Column	Data type	Description
CollectionSpecimenID	int	Refers to the ID of CollectionSpecimen (= Foreign key and part of primary key)
IdentificationUnitID	int	Refers to the ID of IdentficationUnit (= foreign key and part of primary key)
AnalysisID	int	Analysis ID, foreign key of table Analysis.
AnalysisNumber	nvarchar (50)	Number of the analysis
AnalysisResult	nvarchar (MAX)	The result of the analysis
ExternalAnalysisURI	varchar (255)	An URI for an analysis as defined in an external datasoure
ResponsibleName	nvarchar (255)	Name of the person or institution responsible for the

		determination *Default value: [dbo].[CurrentUserName]()*
ResponsibleAgentURI	varchar (255)	URI of the person or institution responsible for the determination (= foreign key) as stored in the module DiversityAgents.
AnalysisDate	nvarchar (50)	The date of the analysis
SpecimenPartID	int	ID of the part of a specimen (optional, Foreign key) if the analysis was done with a part of the specimen (see table CollectionSpecimenPart).
Notes	nvarchar (MAX)	Notes concerning this analysis
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table IdentificationUnitInPart

The list of the organisms that are found in a part of the specimen

Column	Data type	Description
CollectionSpecimenID	int	Refers to the ID of CollectionSpecimen (= Foreign key and part of primary key)
IdentificationUnitID	int	ID of the identification unit (= part of Primary key). Usually one of possibly several organisms present on the collection specimen. Example: parasite with hyperparasite on plant leaf = 3 units,
SpecimenPartID	int	ID of the part of a specimen (optional, Foreign key) if the identification unit is located on a part of the specimen (see table CollectionSpecimenPart).
DisplayOrder	smallint	The sequence in which the units within this part will appear on e.g. a label where the first unit may be printed in the header and others in the

		text below. 0 means the unit should not appear on a label. *Default value: (1)*
Description	nvarchar (500)	A description of the unit, esp. if not a whole unit but e.g. parts of it are stored in the collection, e.g. a nest of a bird
LogInsertedBy	nvarchar (50)	Name of user who first entered (typed or imported) the data. *Default value: user_name()*
LogInsertedWhen	smalldatetime	Date and time when the data were first entered (typed or imported) into this database. *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Name of user who last updated the data. *Default value: user_name()*
LogUpdatedWhen	smalldatetime	Date and time when the data were last updated. *Default value: getdate()*

Table LocalisationSystem

The geographic localisation systems, e.g. coordinates

Column	Data type	Description
LocalisationSystemID	int	Unique ID for the localisation system (= Primary key)
LocalisationSystemParentID	int	LocalisationSystemID of the superior LocalisationSystem
LocalisationSystemName	nvarchar (100)	Name of the system used for the determination of the place of the collection, e. g. Gauss-Krüger, MTB, GIS
DefaultAccuracyOfLocalisation	nvarchar (50)	The default for the accuracy of values that can be reached with this method
DefaultMeasurementUnit	nvarchar (50)	The default measurement unit for the localisation system, e.g. m, geograpic coordinates
ParsingMethodName	nvarchar (50)	Internal value, specifying a programming method used for parsing text in fields Location1/Location2 in table CollectionLocalisation
DisplayText	nvarchar (50)	Short abbreviated description of the localisation system as displayed in the user interface
DisplayEnable	bit	Specifies if this item is enabled to be used within the database.

		LocalisationSystems can be disabled to avoid seeing them, but to keep the definition for the future.
DisplayOrder	smallint	The order in which the entries are displayed. The order may be changed at any time, but all values must be unique.
Description	nvarchar (255)	Description of the localisation method
DisplayTextLocation1	nvarchar (50)	Short abbreviated description of the attribute Location1 in the table CollectionGeography as displayed in the user interface
DescriptionLocation1	nvarchar (255)	Description of the attribute Location1 in the table CollectionGeography as displayed in the user interface
DisplayTextLocation2	nvarchar (50)	Short abbreviated description of the attribute Location2 in the table CollectionGeography as displayed in the user interface
DescriptionLocation2	nvarchar (255)	Description of the attribute Location2 in the table CollectionGeography as displayed in the user interface

Table Processing

The processings of the specimen

Column	Data type	Description
ProcessingID	int	ID of the processing (Primary key)
ProcessingParentID	int	The ID of the superior type of the processing
DisplayText	nvarchar (50)	The display text of the processing as shown e.g. in a user interface
Description	nvarchar (MAX)	Description of the processing
Notes	nvarchar (MAX)	Notes about the processing
ProcessingURI	varchar (255)	An URI for a processing as defined in an external datasource
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this

		dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table ProcessingMaterialCategory

The processings that are possible for a certain material category

Column	Data type	Description
ProcessingID	int	ID of the processing. Refers to ProcessingID in table Processing (foreign key) *Default value: (1)*
MaterialCategory	nvarchar (50)	Material category of specimen. Examples: 'herbarium sheets', 'drawings', 'microscopic slides' etc. *Default value: N'specimen'*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table Transaction

Transactions like loan, borrow, gift, exchange etc. of specimen if they are e.g. permanently or temporary transfered from one collection to another

Column	Data type	Description
TransactionID	int	Unique ID for the transaction (= Primary key)
ParentTransactionID	int	The ID of a preceeding transaction of a superior transaction if transactions are organized in a hierarchy
TransactionType	nvarchar (50)	Type of the transaction e.g. gift in or out, exchange in or out, purchase in or out *Default value: N'exchange'*
TransactionTitle	nvarchar (200)	The title of the transaction as e.g. shown in an user interface
ReportingCategory	nvarchar (50)	A group defined for the transaction, e. g. a taxonomic group as used for exchange balancing
AdministratingCollectionID	int	ID of the collection thas is

		responsible for the administration of the transaction.
MaterialDescription	nvarchar (MAX)	ID of the project to which the transaction belongs (Projects are defined in DiversityProjects) *Default value: ''*
MaterialCategory	nvarchar (50)	Material category of specimen. Examples: 'herbarium sheets', 'drawings', 'microscopic slides' etc. *Default value: N'specimen'*
MaterialCollectors	nvarchar (MAX)	The collectors of the material
FromCollectionID	int	The ID of the collection from which the specimen were transfered, e.g. the donating collection of a gift
FromTransactionPartnerName	nvarchar (255)	Name of the person or institution from which the specimen were transfered, e.g. the donator of a gift
FromTransactionPartnerAgentURI	varchar (255)	The URI of the transaction partner (see e.g. module DiversityAgents)
FromTransactionNumber	nvarchar (50)	Number or code by which a transaction may be recorded by the administration of the source of the specimen, e.g. the donating collection of a gift
ToCollectionID	int	The ID of the collection to which the specimen were transfered, e.g. the receiver of a gift
ToTransactionPartnerName	nvarchar (255)	Name of the person or institution to which the specimen were transfered, e.g. the receiver of a gift
ToTransactionPartnerAgentURI	varchar (255)	The URI of the transaction partner (see e.g. module DiversityAgents)
ToTransactionNumber	nvarchar (50)	Number or code by which a transaction may be recorded by the administration of the destination of the specimen, e.g. the receiving collection of a gift
NumberOfUnits	smallint	The number of units that were (initially) included in the transaction
Investigator	nvarchar (50)	The investigator for whose study a transacted material was sent

TransactionComment	nvarchar (MAX)	Comments about the exchanged material addressed to the transaction partner
BeginDate	datetime	Date when the transaction started
AgreedEndDate	datetime	End of the transaction period, e.g. if the time for borrowing the specimen is restricted
ActualEndDate	datetime	Actual end of the transaction when e.g. the borrowed specimen were returned to the owner
InternalNotes	nvarchar (MAX)	Internal notes about this transaction, not to be published e.g. on a web page
ResponsibleName	nvarchar (255)	The person responsible for this transaction
ResponsibleAgentURI	varchar (255)	The URI of the person, team or organisation responsible for the data (see e.g. module DiversityAgents)
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table TransactionDocument

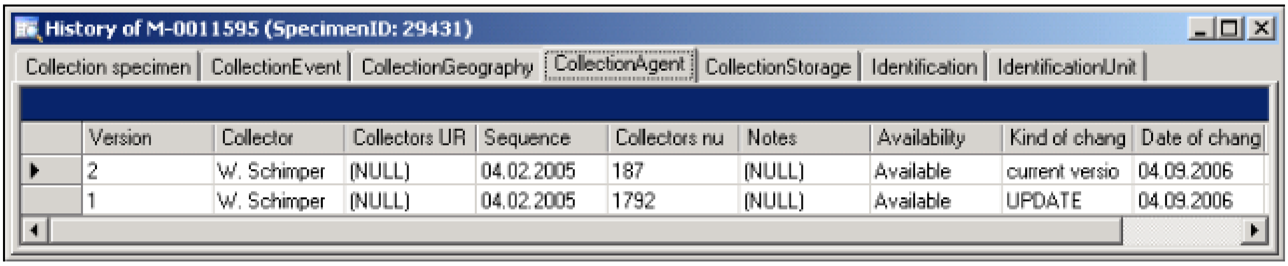
The history of transactions resp. the documents connected to the transactions

Column	Data type	Description
TransactionID	int	Unique ID for the Transaction, refers to table Transaction (= Part of primary key and foreign key)
Date	datetime	The date of the event of a transaction
TransactionText	nvarchar (MAX)	The text of a transaction document
TransactionDocument	image (2147483647)	A scanned document connected to this transaction event
InternalNotes	nvarchar (MAX)	Internal notes about this transaction event

LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

History

To inspect the history of a dataset click on the button. A window will open, showing all former states of the data in the tables with the current dataset at the top. The database DiversityCollection handles 2 different histories - one for the collection specimen and one for the collection event. The version shown in the header of the main window refers to these histories. The first number refers to the version of the specimen. If an event was defined a second number is shown, referring to the version of the collection event, e.g. 2 / 1 means version 2 of the specimen and version 1 of the collection event.

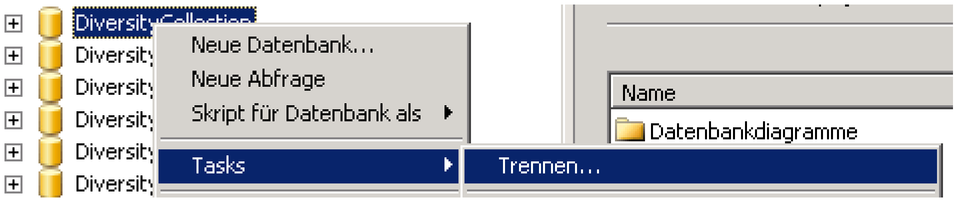


	Version	Collector	Collectors UR	Sequence	Collectors nu	Notes	Availability	Kind of chang	Date of chang
▶	2	W. Schimper	(NULL)	04.02.2005	187	(NULL)	Available	current versio	04.09.2006
	1	W. Schimper	(NULL)	04.02.2005	1792	(NULL)	Available	UPDATE	04.09.2006

The version will be set automatically. If a dataset is changed the version will be increased if the last changes were done by a different user or the last change is more than 24 hours ago (for further details see topic Logging).

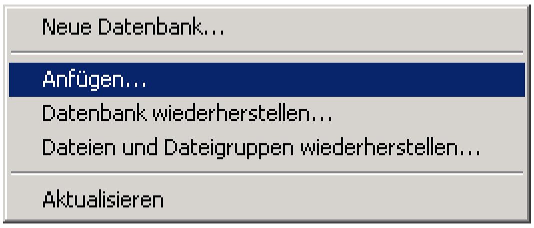
Backup

If you need to backup your database, you have to use the functionality provided by SQL-Server. To do this, you need administration rights in the database you want to create a backup. Open the Enterprise Manager for SQL-Server, choose the database and detach it from the server as shown in the image below.



After detaching the database, you can store a copy of the ..._Data.MDF File to keep it as a backup.

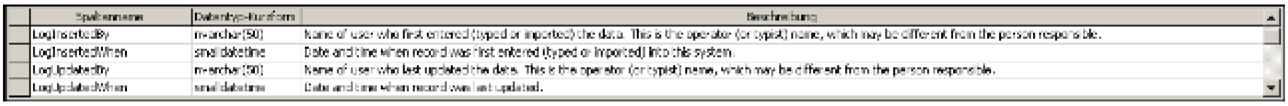
After storing the backup you have to attach the database.



A dialog will appear where you have to select the original database file in your directory.

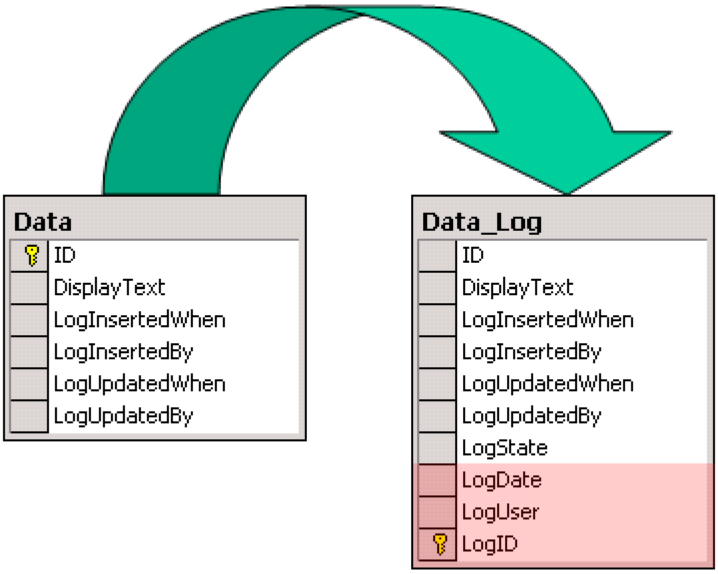
Logging

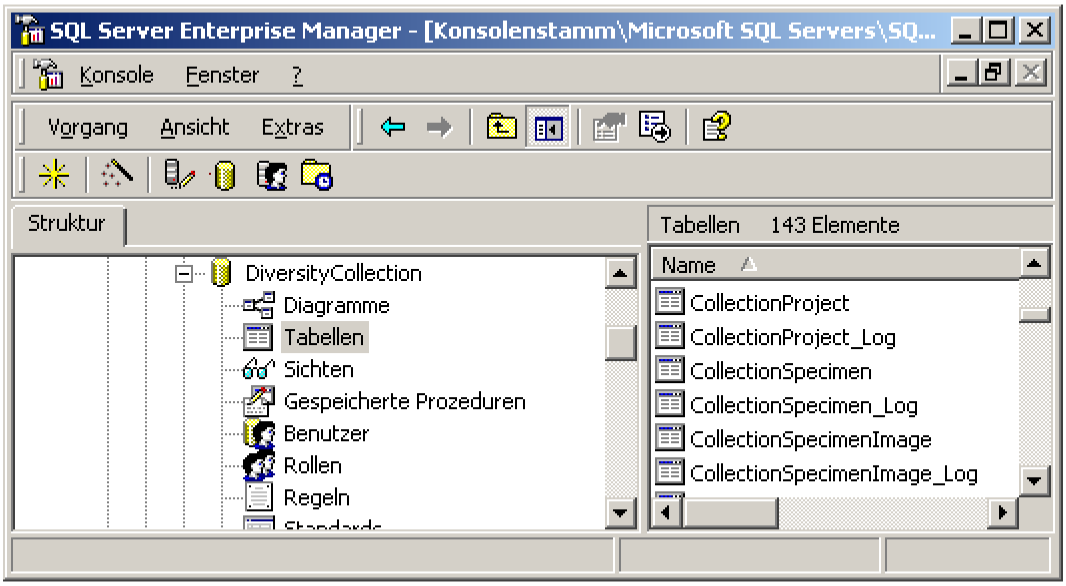
Changes within the database will be documented for each dataset together with the time and the responsible user in the columns shown in the image below.



Spaltenname	Datentyp-Kurzform	Beschreibung
LogInsertedBy	nvarchar(50)	Name of user who first entered (typed or imported) the data. This is the operator (or typist) name, which may be different from the person responsible.
LogInsertedWhen	smalldatetime	Date and time when record was first entered (typed or imported) into this system.
LogUpdatedBy	nvarchar(50)	Name of user who last updated the data. This is the operator (or typist) name, which may be different from the person responsible.
LogUpdatedWhen	smalldatetime	Date and time when record was last updated.

All main tables have a corresponding logging table. If you change or delete a dataset the orignial dataset will be stored in this logging table together with informations about who has done the changes and when it happend.





Version of datasets

The **Version** of a dataset consists of two parts, e.g. 3 / 1 as shown in the header of the specimen in the main form. The first part of the number refers to the version of the dataset as stored in table CollectionSpecimen. The second part refers to the version as stored in the table CollectionEvent. Both versions will be set to a higher number if the data in the tables themselves or in dependent tables are changed, e.g. the insertion of a new identification in the table Identification will increase the specimen part of the version from 3 to 4 resulting in a version 4 / 1 for the whole dataset. The changes in the version will only occur if the last changes in the data were more than **24 hours** ago or a **different user** is changing the data. This ensures, that a user can change several parts in a dataset within 24 hours and the version will only be increased by 1.

Acc.No. M-0040397

Erysiphe aquilegiae var. ranunculi (Grev.) U. Braun

ID (Specimen / Event) 135548 / 211558

Version 3 / 1

The data are stored in the tables CollectionSpecimen and CollectionEvent.

Database - Application tables

Informations concerning the application are stored in the application tables. The table ApplicationSearchSelectionStrings hold the SQL-strings of the predefined queries for the users. The table ApplicationEntityDescription holds the description of the database entities, if these are different from the description in the database, especially if other languages then English are to be supported.

Index

Table **ApplicationEntityDescription**

The description of the columns in different languages

Column	Data type	Description
TableName	varchar (50)	The name of the table within the database
ColumnName	varchar (50)	The name of the column of the table within the database
DisplayText	nvarchar (50)	The text for the column as shown e.g. in a user interface
Description	nvarchar (MAX)	The description of the content of the column
LanguageCode	nvarchar (50)	ISO 639: 2-letter codes for the language of DisplayText and Description
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table **ApplicationSearchSelectionStrings**

Selection strings for customized queries for users

Column	Data type	Description
UserName	varchar (50)	The name of the user who created this SQL string

		Default value: user_name()
SQLStringIdentifier	varchar (50)	The identifier for the selection string as shown in user interface
ItemTable	varchar (50)	The main table from which the datasets should be selected *Default value: 'TaxonName'*
SQLString	varchar (MAX)	SQL string for selecting datasets from the database
Description	nvarchar (MAX)	Description of the resultset and the purpose of the query
LogCreatedWhen	datetime	The time when this dataset was created *Default value: getdate()*
LogCreatedBy	nvarchar (50)	Who created this dataset *Default value: user_name()*
LogUpdatedWhen	datetime	The last time when this dataset was updated *Default value: getdate()*
LogUpdatedBy	nvarchar (50)	Who was the last to update this dataset *Default value: user_name()*

Table ProjectProxy

The projects as stored in the module DiversityProjects

Column	Data type	Description
ProjectID	int	ID of the project to which the specimen belongs (Projects are defined in DiversityProjects)
Project	nvarchar (50)	The name or title of the project as shown in a user interface (Projects are defined in DiversityProjects)

Table ProjectUser

The projects that a user can access

Column	Data type	Description
LoginName	nvarchar (50)	A login name which the user uses for access the DivesityWorkbench, Microsoft domains, etc..
ProjectID	int	ID of the project to which the specimen belongs (Projects are defined in DiversityProjects)

Table UserProxy

The user as stored in the module DiversityUsers

Column	Data type	Description
LoginName	nvarchar (50)	A login name which the user uses for access the DivesityWorkbench, Microsoft domains, etc..
CombinedNameCache	nvarchar (255)	The short name of the user,

		e.g. P. Smith *Default value: NULL*
UserURI	varchar (255)	URI of a user in a remote module, e.g. refering to UserInfo.UserID in database DiversityUsers

Diversity Workbench

The Diversity Workbench is composed of components for building and managing biodiversity information, each of which focuses on a particular domain. Each component can provide services to the other components. DiversityCollection can link data to the modules DiversityProjects, DiversityResources, DiversityExsiccatae, DiversityGazetteer, DiversityScientificTerms, DiversityTaxonNames, DiversityAgents, DiversityUsers and DiversityReferences as illustrated in the image below.

The modules communicate with each other to provide their services for the other modules.

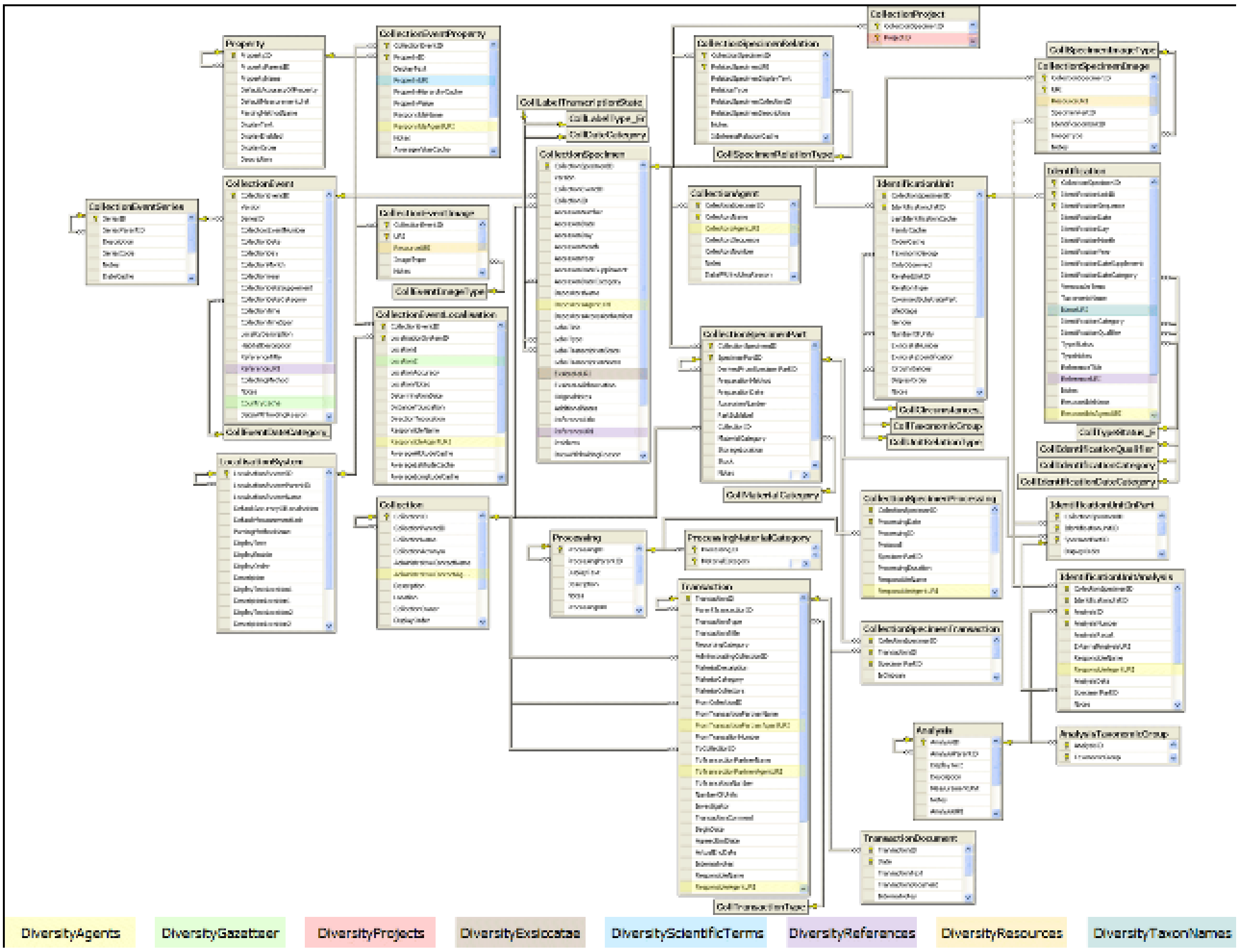
Modules

The Diversity Workbench is a set of components for building and managing biodiversity information, each of which focuses on a particular domain.

DiversityAgents	Administration of the agents, i.e. people and institutions which should be documented with e.g. their addresses
DiversityCollection	Administration of the scientific collections and specimens within these collections
DiversityDescriptions	Administration of descriptive data
DiversityExsiccatae	Administration of exsiccatal series
DiversityGazetteer	A data collection to enable the linking of geographical records with the Getty Thesaurus of Geographical Names (TGN), the Germ geographical names.
DiversityScientificTerms	Data collections of scientific terms from foreign sources like vegetation, stratigraphy, soil science etc.
DiversityProjects	Administration of projects within the Diversity Workbench
DiversityReferences	Administration of references
DiversityResources	Administration of resources like images, etc.
DiversityTaxonNames	Administration of taxonomic names, their synonyms and hierarchical position
DiversityUsers	Administration of the users and their permissions within the Diversity Workbench

Each module provides services for the other modules. To use the service of a module, you need access to the database of the module and optionally the module application placed in your application directory.

In the graphic below the connections to other modules within DiversityCollection are indicated.

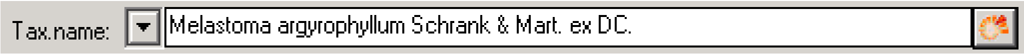


In the form a connection to a module of [Diversity Workbench](#) is a set of components for building and managing biodiversity information, each of which focuses on a particular domain.

Module related entry

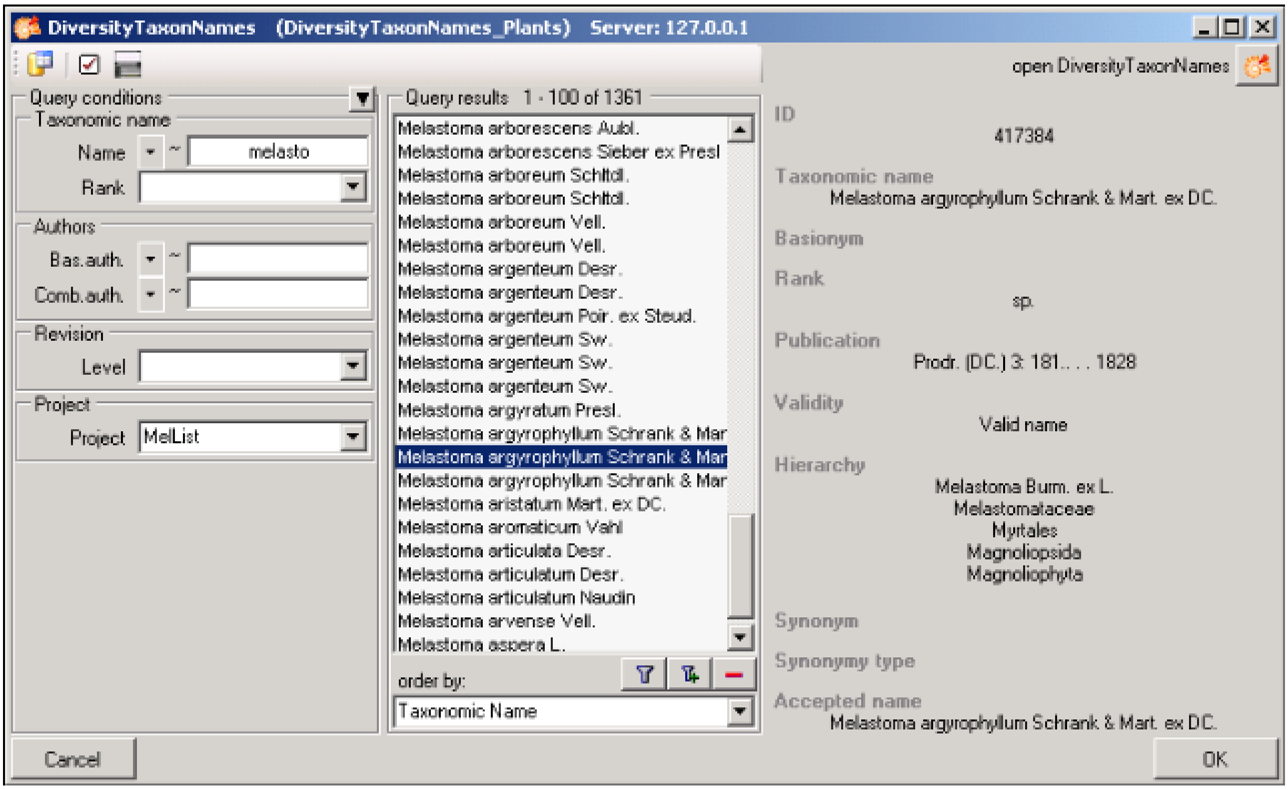
The Diversity Workbench is a set of components for building and managing biodiversity information, each of which focuses on a particular domain. Each module provides services for the other modules. To use the service of a module, you need access to the database of the module and optionally the module application placed in your application directory. Entries related to an external module have a standard interface in the main form. There are 2 states of this interface:

1 - the value is only set in the local database with no connection to the remote module



Tax.name: Melastoma argyrophyllum Schrank & Mart. ex DC.

In this state, you can either type the value or select it from the values that are already available in the database. To get a list of the available values type the beginning of the value (you may use wildcards) and click on the ▼ button. If you want to set a relation to the remote module, click on the button. A window will open where you may select an entry from the foreign database.



Taxonomic name
Name ~ melasto
Rank
Authors
Bas.auth. ~
Comb.auth. ~
Revision
Level
Project
Project MelList

Query results 1 - 100 of 1361

Melastoma arborescens Aubl.
Melastoma arborescens Sieber ex Presl
Melastoma arboreum Schltdl.
Melastoma arboreum Schltdl.
Melastoma arboreum Vell.
Melastoma arboreum Vell.
Melastoma argenteum Desr.
Melastoma argenteum Desr.
Melastoma argenteum Poir. ex Steud.
Melastoma argenteum Sw.
Melastoma argenteum Sw.
Melastoma argenteum Sw.
Melastoma argyratum Presl.
Melastoma argyrophyllum Schrank & Mar
Melastoma argyrophyllum Schrank & Mar
Melastoma argyrophyllum Schrank & Mar
Melastoma aristatum Mart. ex DC.
Melastoma aromaticum Vahl
Melastoma articulata Desr.
Melastoma articulatum Desr.
Melastoma articulatum Naudin
Melastoma arvense Vell.
Melastoma aspera L.

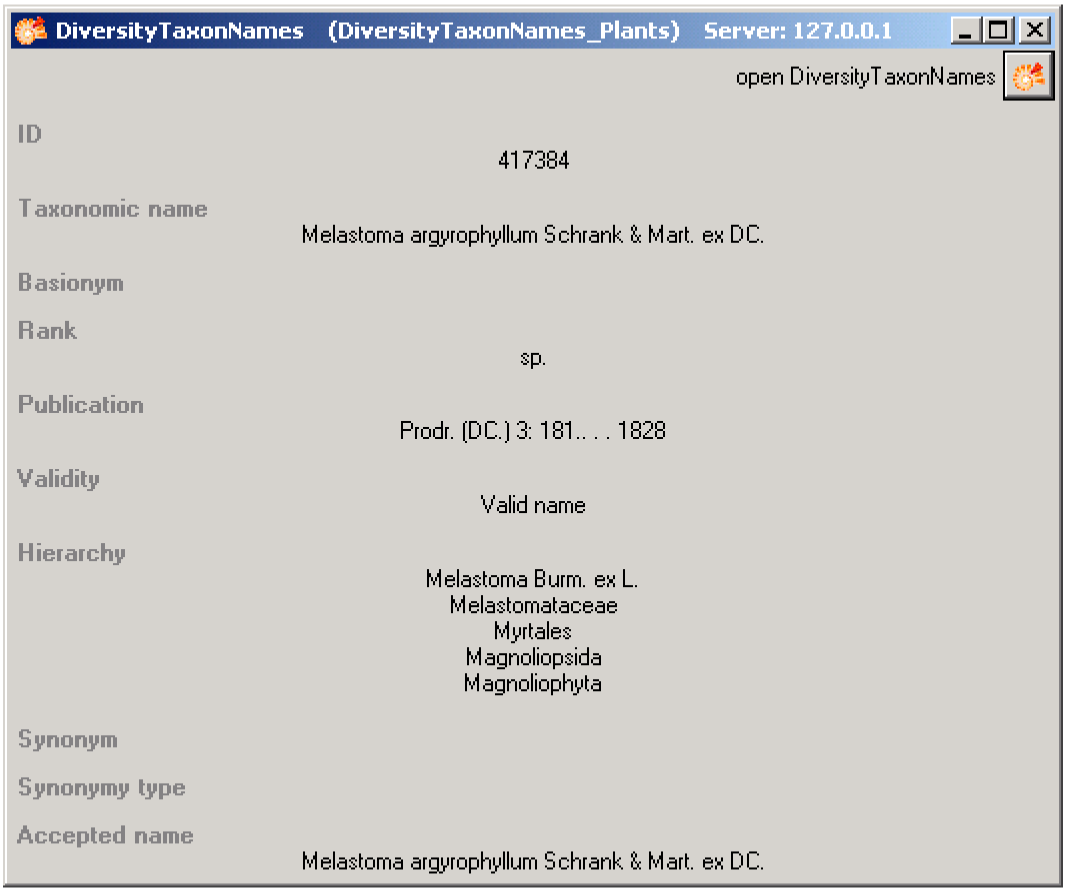
order by: Taxonomic Name

ID: 417384
Taxonomic name: Melastoma argyrophyllum Schrank & Mart. ex DC.
Basionym
Rank: sp.
Publication: Prodr. (DC.) 3: 181.. . . 1828
Validity: Valid name
Hierarchy:
Melastoma Burm. ex L.
Melastomataceae
Myrtales
Magnoliopsida
Magnoliophyta
Synonym
Synonymy type
Accepted name: Melastoma argyrophyllum Schrank & Mart. ex DC.

2 - the value is related to the remote module

Tax.name: Melastoma argyrophyllum Schrank & Mart. ex DC.

If the value has a relation to the remote module, the interface will appear as shown above. To release the connection to the remote module click on the ✕ button. If you need further information about the value, click on the button. This will open a form, showing an overview of the related value.



ID
417384

Taxonomic name
Melastoma argyrophyllum Schrank & Mart. ex DC.

Basionym

Rank
sp.

Publication
Prodr. (DC.) 3: 181.. . . 1828

Validity
Valid name

Hierarchy
Melastoma Burm. ex L.
Melastomataceae
Myrtales
Magnoliopsida
Magnoliophyta

Synonym

Synonymy type

Accepted name
Melastoma argyrophyllum Schrank & Mart. ex DC.

If the client application of the module is available you can inspect the details of the entry. To start the client application of the remote module, just click on the button.

3 - relation to a webservice

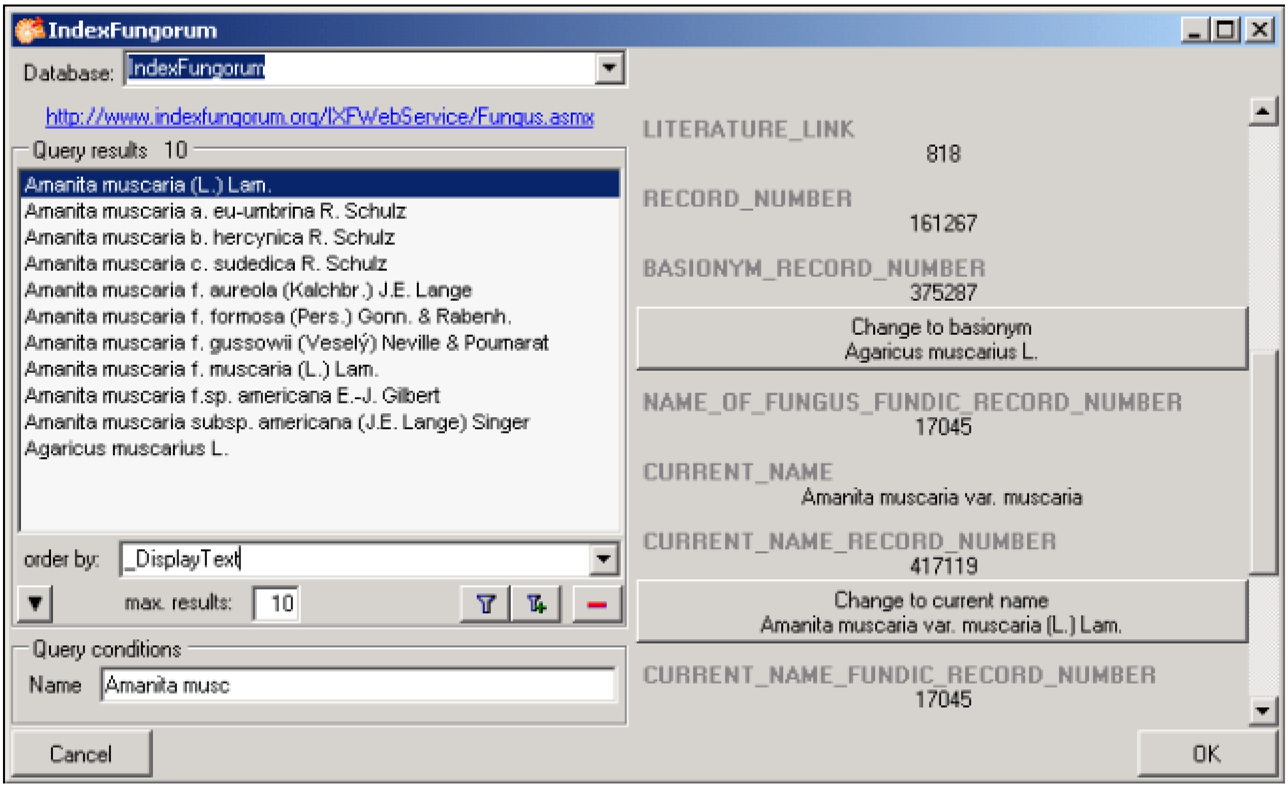
Some modules provide the possibility to link your data to an external webservice. For example DiversityTaxonNames gives you access to the taxonomic names of IndexFungorum. To establish a connection to an external webservice, click on the button. As with the link to modules within the Diversity Workbench a window will open where you can choose from either Diversity Workbench modules or external Webservices. See Webservice for further details

4 - relation to a local service

Some modules provide the possibility to link your data to a local installed service. For example DiversityTaxonNames gives you access to the taxonomic names of the Catalogue of life. See Catalogue of Life for further details

Webservice - foreign sources

Some modules within the Diversity Workbench provide the possibility to link your data to an external webservice. For example DiversityTaxonNames gives you access to the taxonomic names of IndexFungorum. To establish a connection to an external webservice, click on the button. A window will open where you can choose from either Diversity Workbench modules or external Webservices.



Database: IndexFungorum

http://www.indexfungorum.org/IXFWebService/Fungus.asmx

Query results 10

- Amanita muscaria (L.) Lam.
- Amanita muscaria a. eu-umbrina R. Schulz
- Amanita muscaria b. hercynica R. Schulz
- Amanita muscaria c. sudedica R. Schulz
- Amanita muscaria f. aureola (Kalchbr.) J.E. Lange
- Amanita muscaria f. formosa (Pers.) Gonn. & Rabenh.
- Amanita muscaria f. gussowii (Veselý) Neville & Poumarat
- Amanita muscaria f. muscaria (L.) Lam.
- Amanita muscaria f.sp. americana E.-J. Gilbert
- Amanita muscaria subsp. americana (J.E. Lange) Singer
- Agaricus muscarius L.

order by: _DisplayText

max. results: 10

Query conditions

Name: Amanita musc

LITERATURE_LINK
818

RECORD_NUMBER
161267

BASIONYM_RECORD_NUMBER
375287

Change to basionym
Agaricus muscarius L.

NAME_OF_FUNGUS_FUNDIC_RECORD_NUMBER
17045

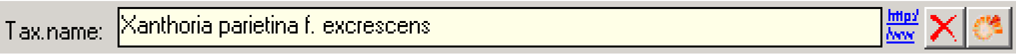
CURRENT_NAME
Amanita muscaria var. muscaria

CURRENT_NAME_RECORD_NUMBER
417119

Change to current name
Amanita muscaria var. muscaria (L.) Lam.

CURRENT_NAME_FUNDIC_RECORD_NUMBER
17045

If you choose a webservice the window will change as shown in the above image. Enter the query condition for your search and the maximal number of records you want to get in the max. results field max. results: 50 (choose a low number if you have a slow connection to the internet). Then click on the search button to start the query. In the right part of the window additional information is shown as provided by the webservice. For certain entries buttons will appear, as e.g. shown above for the basionym and the current name of a scientific name. Click on these buttons if you want to change to one of these related datasets from the webservice. To take the link from the webservice into your database choose one of the entries and click OK. The entry will change as shown below.



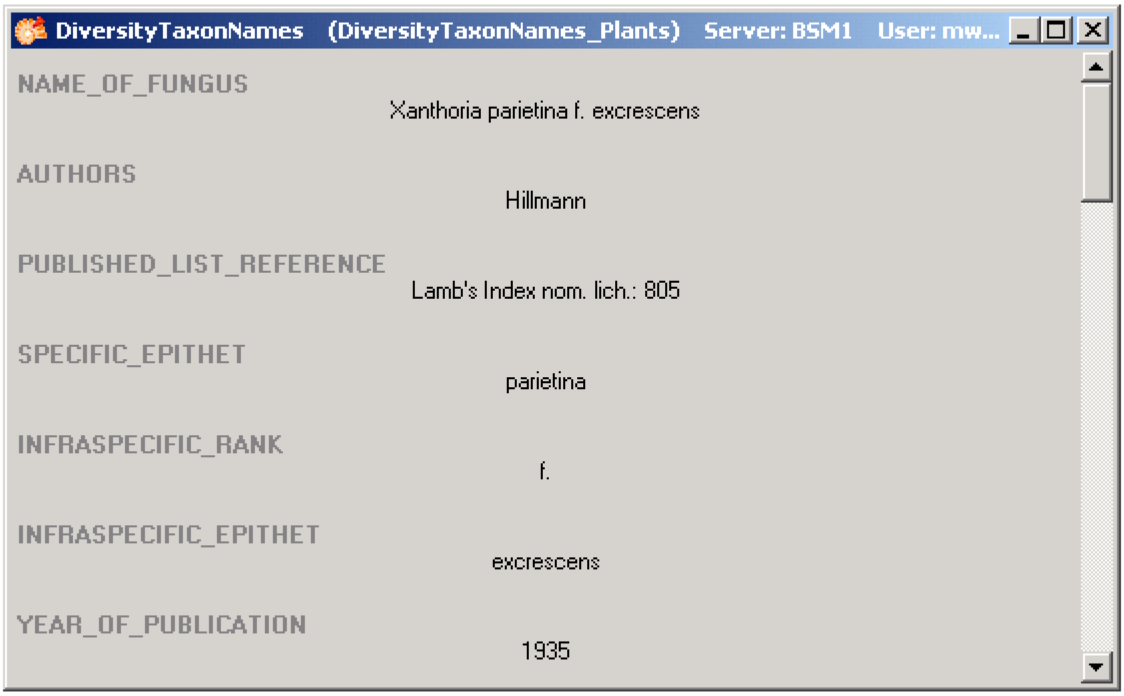
Tax.name: Xanthoria parietina f. excrescens

If you double-click on the link area a window will open, providing you with the retrieval information of the webservice.

URI of Xanthoria parietina f. excrescens

http://www.indexfungorum.org/IXFWebService/Fungus.asmx/NameByKeyRDF?NameLsid=416173

To get the whole information related to this entry as provided by the webservice, click on the button. A window will open as shown below where the informations of the webservice are listed.



NAME_OF_FUNGUS
Xanthoria parietina f. excrescens

AUTHORS
Hillmann

PUBLISHED_LIST_REFERENCE
Lamb's Index nom. lich.: 805

SPECIFIC_EPITHET
parietina

INFRASPECIFIC_RANK
f.

INFRASPECIFIC_EPITHET
excrescens

YEAR_OF_PUBLICATION
1935

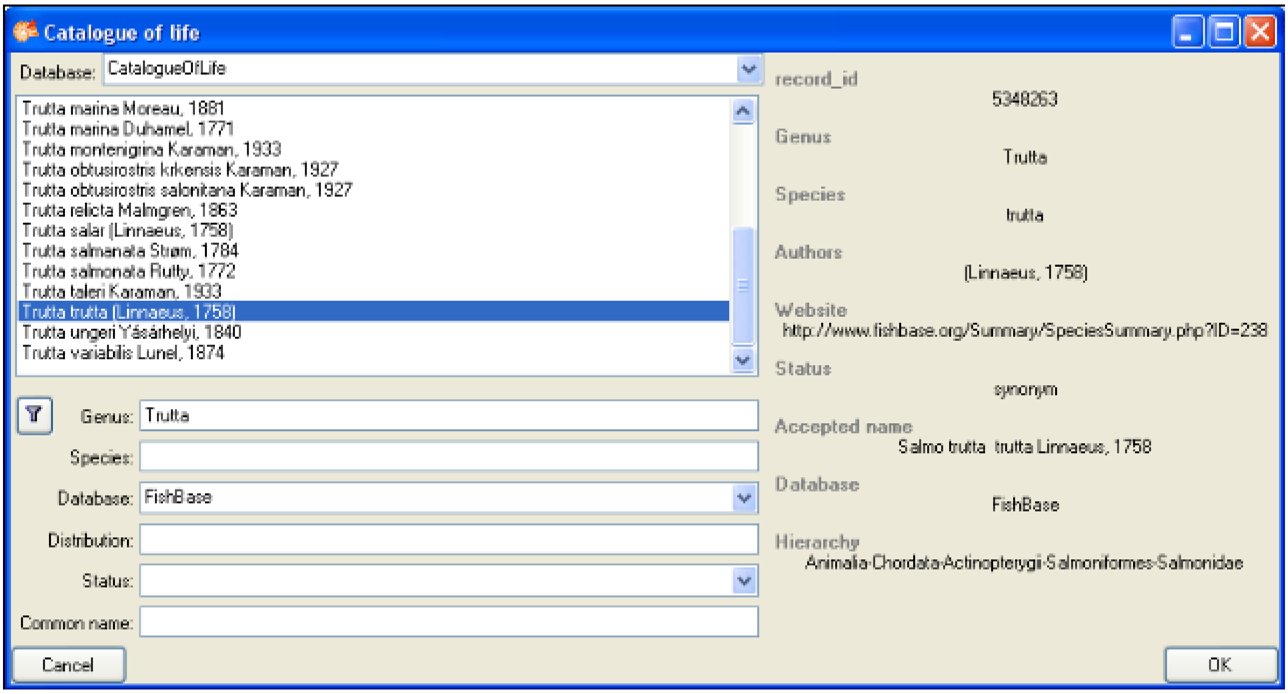
If you want to remove the link to the webservice, click on the ✕ button. This will only remove the relation to the webservice, not the cached name.

Catalogue of life

Some modules within the Diversity Workbench provide the possibility to link your data to a foreign source. For example DiversityTaxonNames gives you access to the taxonomic names of the Catalogue of life. To establish a connection to this source, click on the button. As with the link to modules within the Diversity Workbench a window will open where you can choose from either Diversity Workbench modules, external Webservices or foreign sources. If you need the service of the catalogue of life, you have to install this according to the installation instructions provided at http://www.catalogueoflife.org/annual-checklist/2008/info_about_col.php. If you have the catalogue of life installed on your local machine, you have access to this service provided the service is started. Start the service e.g. by choosing **Programs** -> **Catalogue of Life** -> **2008 Annual Checklist** from your Windows Start menu (the exact path depends on your local installation).

An icon will apear in your Windows Task panel, showing that the MicroWeb server is running. Than choose the Catalogue of life from the list as shown below. If you forget to start this service, the programm will try to start it. To stop this service, right-click on this symbol and choose Exit.

If the service is started you can search the names provided by the Catalogue of life as shown below.



Catalogue of life

Database: CatalogueOfLife

Trutta marina Moreau, 1881
Trutta marina Duhamel, 1771
Trutta montenigrina Karaman, 1933
Trutta obtusirostris krkensis Karaman, 1927
Trutta obtusirostris salonitana Karaman, 1927
Trutta relicta Malmgren, 1863
Trutta salar (Linnaeus, 1758)
Trutta salmanata Strøm, 1784
Trutta salmonata Rutty, 1772
Trutta taleri Karaman, 1933
Trutta trutta (Linnaeus, 1758)
Trutta ungeri Yásárhelyi, 1840
Trutta variabilis Lunel, 1874

Genus: Trutta
Species:
Database: FishBase
Distribution:
Status:
Common name:

record_id: 5348263
Genus: Trutta
Species: trutta
Authors: (Linnaeus, 1758)
Website: http://www.fishbase.org/Summary/SpeciesSummary.php?ID=238
Status: synonym
Accepted name: Salmo trutta trutta Linnaeus, 1758
Database: FishBase
Hierarchy: Animalia-Chordata-Actinopterygii-Salmoniformes-Salmonidae

You can choose one of the databases provided by the Catalogue of Life and enter the query conditions for your search. Then click on the search button to start the query. In the right part of the window additional information is shown as provided by the service. To take the link from the service into your database choose one of the entries and click OK. The entry will change as shown below.

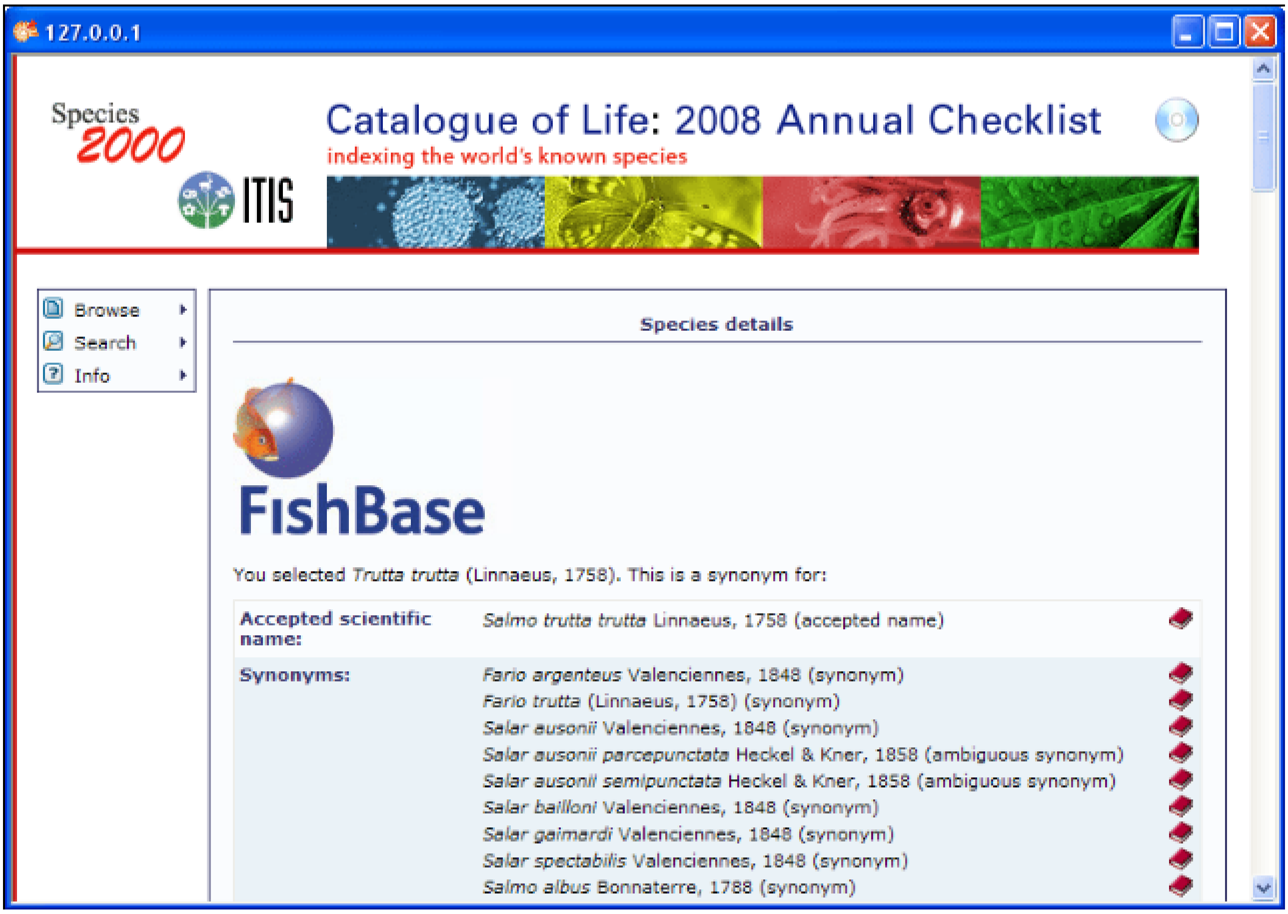
Tax.name: Trutta trutta (Linnaeus, 1758)

If you double-click on the link area a window will open, providing you with the retrieval information of the service.

URI of Trutta trutta (Linnaeus, 1758)

http://127.0.0.1/show_species_details.php?record_id=5348263

To get the whole information related to this entry as provided by the service, click on the button. A window will open as shown below where the informations of the service are listed.



You selected *Trutta trutta* (Linnaeus, 1758). This is a synonym for:

Accepted scientific name:	*Salmo trutta trutta* Linnaeus, 1758 (accepted name)
Synonyms:	*Fario argenteus* Valenciennes, 1848 (synonym) *Fario trutta* (Linnaeus, 1758) (synonym) *Salar ausonii* Valenciennes, 1848 (synonym) *Salar ausonii parcepunctata* Heckel & Kner, 1858 (ambiguous synonym) *Salar ausonii semipunctata* Heckel & Kner, 1858 (ambiguous synonym) *Salar bailloni* Valenciennes, 1848 (synonym) *Salar gaimardi* Valenciennes, 1848 (synonym) *Salar spectabilis* Valenciennes, 1848 (synonym) *Salmo albus* Bonnaterre, 1788 (synonym)

If you want to remove the link to the service, click on the ✕ button. This will only remove the relation to the service, not the cached name.

Resources

Images for specimen and the collection event can either be stored in DiversityCollection with their file path or in more detail in the module DiversityResources. For directly changing to DiversityResources click on the button.

For direct access to the resources in this module, you need the application **DiversityResources.exe** in your application directory, the database DiversityResources and a valid account in the database DiversityUsers. For more information see the Diversity Workbench Portal.

Reference

Details about References are stored in the module DiversityReferences. You can choose one of the entries in this module from the picklist. To directly change to DiversityReferences click on .

For access to the references from other modules, you need the application **DiversityReferences.exe** in your application directory. To use the application DiversityReferences.exe you need access to the database DiversityReferences. For more information see the Diversity Workbench Portal.